THE WILDERNESS ACT • REAGAN'S SECOND TERM

SIERRA

MAY/JUNE 1984 $2.00

At what point do you become a serious photographer?

It starts with a glimmer. A spark in your mind, hinting that photography can be more than just a quick way to freeze a memory.

As that feeling grows, things like composition, angle, and lighting become an exciting challenge. Time consuming? Yes. Worth it? Definitely. And you notice that while others might hope for interesting pictures to happen, you can make them happen.

Soon (though you can't exactly remember when), you begin to refer to your pictures as photographs. And nobody's laughing. Because in your photographs, you're capturing not just people and places, but feelings.

It is possibly at this point that you smile at how far you've come. Yet can't help wondering how far you can go.

It is at this point that you can fully appreciate the Olympus OM-4.

In an age when most camera innovations are designed to give you less to do, the OM-4 has something that lets you do more. It's called Multi-Spot Metering. And it gives you what photographers have dreamed of since the beginning of photography itself: creative control of light.

You see, most cameras, as sophisticated as they are, have an averaging meter, which averages all the highlights and shadows in your scene and gives you an exposure somewhere in between. You can't tell an averaging meter to give special attention to the areas you feel are most important. So, very often, you end up with a photograph that's, well, average.

And that's where the Olympus OM-4 with Multi-Spot Metering makes a world of difference. Because now you can decide which part of your photograph deserves the best exposure. Just center your subject in the microprism section of the viewfinder, push the spot button to set in the reading, recompose, and shoot for the perfect exposure. In fact, you can take up to 8 individual readings for each shot; the OM-4's computer will balance them perfectly. And you can store a reading in the OM-4's memory for up to an hour when you're planning a whole sequence of shooting.

With the OM-4, you'll capture backlit, spotlit, and high contrast scenes as never before. Without bracketing. Without compensating. Without wasting a shot. The OM-4 even features Highlight Control and Shadow Control for the most dramatic effects imaginable.

You really have to see the OM-4 to believe it. Visit your Olympus dealer, or write for a brochure: Olympus, Box P, Woodbury, NY 11797. In Canada: W. Carsen Co. Ltd., Toronto.

The Olympus OM-4. We think every serious photographer will own one.

OLYMPUS®

WHEN YOU HAVE MORE TO SAY THAN JUST SMILE.

HOW TO HELP A LITTLE GIRL MAKE IT ALL THE WAY TO 7.

It wasn't long ago that if little Kamala Rama drank the water in her village she would have taken her life in her hands.

Today, thanks to Save the Children, she can have clean water to wash with, and fresh water for her mother to cook with.

And she can do something else that was once unheard of in her village for a little girl.

She can go to school. Even go past the fifth grade.

When you first sponsor a child through Save the Children, you have no idea how much just $16 a month can do.

By combining your funds with other sponsors, we're helping families, even entire communities, do so much. The result is that children are now getting things they didn't always have:

Better food. Clean drinking water. Decent housing. Medical care. A chance to go to school.

In fact, for over 50 years, Save the Children has been working little life-saving miracles here in America and around the world.

And the wonderful feeling of sponsoring a child comes to only 52¢ a day. The cost of a cup of coffee.

What's more, you'll get a photo of the child you sponsor, a personal history, progress reports and a chance to correspond, if you'd like.

Please, won't you help. Send in the coupon today.

There are still so many children who need the chance Kamala Rama got.

The chance to make it to 7.

Gary Shave

Because 50 years of experience has taught us that direct handouts are the least effective way of helping children, your sponsorship contributions are not distributed in this way. Instead, they are used to help children <u>in the most effective way possible</u>—by helping the entire community with projects and services, such as health care, education, food production and nutrition.

Established 1932. The original child sponsorship agency. <u>Your sponsorship payments and contributions are U.S. income tax deductible.</u> We are indeed proud of our use of funds. Based on last year's audit, an exceptionally large percentage (82.1%) of each dollar spent was used for program services and direct aid to children and their communities. Our annual summary with financial statement is available upon request.

☐ Yes, I would like to sponsor a child. My first monthly sponsorship payment of $16 is enclosed. I prefer to sponsor a ☐ boy ☐ girl ☐ either in the area I've checked below.

- ☐ <u>Where the need is greatest</u>
- ☐ Africa
- ☐ American Indian
- ☐ Appalachia (U.S.)
- ☐ Bangladesh
- ☐ Chicano (U.S.)
- ☐ Colombia
- ☐ Dominican Republic
- ☐ Honduras
- ☐ Indonesia
- ☐ Inner Cities (U.S.)
- ☐ Israel
- ☐ Lebanon
- ☐ Mexico
- ☐ Nepal
- ☐ Philippines
- ☐ Southern States (U.S.)
- ☐ Sri Lanka
- ☐ Thailand

Mail to: Save the Children
50 Wilton Road, Westport, Connecticut 06880
Attn: David L. Guyer, President

Name ______________________
(Please print)

Address ______________________

City ______________________

State ____________ Zip ____________

SCB 5/4

☐ Instead of becoming a sponsor at this time, I am enclosing a contribution of $ ____________

☐ Please send me more information.

© 1984 Save the Children Federation

MOUNTAIN TRAVEL

ALASKA

NORTH AMERICA & HAWAII

Mountain Travel's Alaska journeys each emphasize a particular activity: rafting, natural history, backpacking, climbing or a combination of outdoor pursuits.

In Southeast Alaska's waterbound wilderness, we watch from our kayaks as tidewater glaciers shed giant icebergs into the fjords. In the Alaska Range, we trek or climb on the imposing massif of Mt. McKinley, highest peak outside the Himalayas and Andes. In the jagged Brooks Range, south of the Arctic Slope, we glide by raft, kayak and canoe, exploring a primal wilderness where brown bears fish in swift arctic rivers and the glow of the northern lights illuminates the sky.

Our groups are small (maximum of 12 members), our leaders are experts, and our itineraries are flexible enough to accommodate a wide variety of individual interests.

DISCOVER ALASKA

Wilderness camping in Glacier Bay, natural history tour in Denali (McKinley) National Park, and visits to Juneau, Skagway and Whitehorse.

15-day trips depart Jun 23, Jul 7, Aug 4.

THE MCKINLEY TREK

Eight-day hike up onto the northern glaciers of spectacular Mt. McKinley; challenging trekking and fantastic views.

14-day trips depart Jun 8, Aug 4.

TATSHENSHINI ALSEK RAFTING

One of the world's premier river trips, rafting the Tatshenshini River from the mountain splendor of Wrangell/St. Elias National Park to the bays of the Pacific.

12-day trip departs Aug 4.

GLACIER BAY/ADMIRALTY ISLAND

Easy flat-water kayaking in the iceberg-strewn fjords of Glacier Bay and a canoe traverse of the lakes of Admiralty Island, the "Fortress of the Bears."

14-day trips depart Jun 23, Jul 14, Aug 11.

OTHER NORTH AMERICAN TRIPS:

Llama trekking in the North Cascades, backpacking in the White Mountains of New Hampshire, hiking and beach camping in Hawaii.

FOR MORE INFORMATION

Send for our 24-page 1984 ALASKA CATALOG, complete with maps and itineraries (include $2 for postage) and/or write for our FREE 8-page 1984 Schedule which describes more than 200 outings and expeditions on five continents. Also available: catalogs for Asia, Africa, Europe, and Peru (include $1 for each additional catalog or $5 for all five).

Mountain Trave
1398 Solano Avenue • Suite 10
Albany, California 9470
(415) 527-810

FOR RESERVATIONS
CALL TOLL-FRE
800-227-2384
(outside California only

See Your Travel Agen

SIERRA

THE SIERRA CLUB BULLETIN MAY/JUNE 1984 VOLUME 69/NUMBER 3

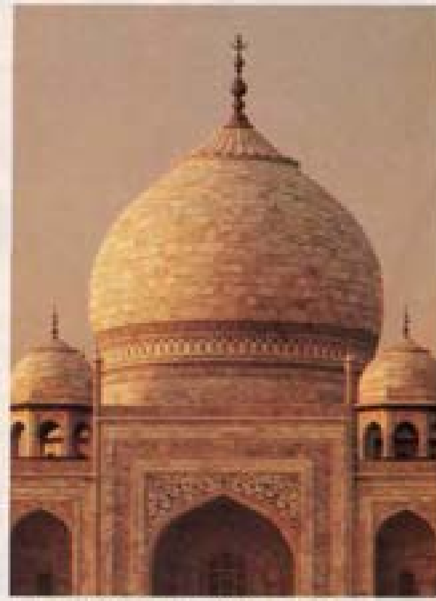
FEATURES

7 A Changing of the Guard *James Keough*
36 Securing the Wilderness *Douglas W. Scott*
 40 The Visionary Role of Howard Zahniser
 43 What Is Wilderness?
44 India's Emerging Environmentalists *Richard Tucker*
 48 Pollution Imperils the Taj Mahal *Darryl D'Monte*
51 Ronald Reagan and the Limits of Responsibility *Carl Pope*
55 Tips From a Spokes Person *Ted P. Eugenis*
61 Music as Nature's Voice *Ingram Marshall*
66 A Sierra Club Quiz *Peggy Wayburn*
72 Preserving the Tallgrass Prairie *Madonna Luers King*
79 Sierra Club Outings

DEPARTMENTS

8 Letters
15 News
19 Politics
 19 Alaska's Public Lands: Lax Enforcement Undermines ANILCA *Edgar Wayburn*
 23 Ocean Incineration: The Public Fumes While EPA Fiddles *Keith Schneider*
 26 Homestake II: Conflict Beneath a Cross of Snow *Jeff Rennicke*
 32 Counter CWIP: Who'll Pay for New Power Plants? *Brooks Yeager*
82 Books
96 For Younger Readers: Nom de Blooms *Mary Lou Burket*
98 Observer
 98 Ann Williams: Kern-Kaweah's Activist Writer *Bob Irwin*
 106 Wilderness '84: Off to a Rousing Start *Bruce Hamilton*
109 Sierra Notes
118 Questions & Answers

The Wilderness Act, page 36.



India's Environmentalists, page 44.

Reagan's Second Term, page 51.

Buying a Bike, page 55.

COVER: The Large Shooting Star (*Dodecatheon Jeffreyi*), a member of the Primrose family, is also known as Mad Violet, Mosquito-bill, and Prairie-pointer. For other amusing and informative wildflower names, turn to page 96. Photo © John Gerlach/DRK Photo.

Sierra (USPS 495-920) (ISSN 0161-7362), published bimonthly, is the official magazine of the Sierra Club, 530 Bush St., San Francisco, California 94108. Annual dues are $29. Members of the Sierra Club subscribe to *Sierra* through their dues. Nonmember subscriptions: one year $10; three years $28; foreign $14; single copy $2. Members may purchase additional one-year subscriptions for $8 (send to 530 Bush St., Attn: Subscriptions). Second-class postage paid at San Francisco, Calif., and additional mailing offices. Copyright © 1984 by the Sierra Club. Reprints of selected articles are available from Sierra Club Information Services.
CHANGE OF ADDRESS should be sent to Sierra Club Member Services, 530 Bush St., San Francisco, CA 94108. Along with your old and new addresses, please include a *Sierra* address label. Phone (415) 981-8634 (voice); (415) 398-5384 (TDD).

BUILT FOR SPEED. VERY SLOWLY.
Trek cannot boast of a decades-old racing heritage. Nor of a single yellow jersey in a Tour de France.
Not yet.
Rather, Trek has been content with developing, in a quiet Wisconsin town, the most highly-evolved cycling machines that technology will allow.
Their philosophy is not one of merely slapping components onto the requisite set of alloy tubing. Because to Trek, a bike's performance is as much a product of advanced thinking as it is the sum of its parts. A balance of forces and function that will return every ounce of energy and sweat invested.
Regardless of whether your style leans towards rhythmic climbing or straight-out hammering.
Trek's racing frame geometry: creating a synergetic link between cycle and cyclist.
COMPONENTS: A MATCHED SET OF SENSIBILITIES.
In viewing the racing bicycle as a total entity, Trek has specified component groups which mesh perfectly with the frame's function.
Weight is an important criterion. But racing discipline also requires parts to work precisely, be adjusted easily, and to withstand the occasional spill.
The dealer who sells you your bike is an important criterion, too.
And Treks are only sold through a cross-country network of pro shops. Each adept at offering you the advice,
Trek's attention to the smallest detail is evident in tapered-bearing headsets that distribute stress more evenly.
fitting, and service which a serious cyclist demands.
Trek racing bicycles. It takes a lot longer to build a bicycle like ours.
But then again, that's another race we've never tried to win.
TREK
FURTHER THAN YOU'VE EVER GONE.™
© 1984 Trek Bicycle Corporation, Waterloo, WI. U.S.A.

Founded in 1892, the Sierra Club works to restore the quality of the natural environment and to maintain the integrity of ecosystems. Educating the public to understand and support these objectives is basic to the Club's program.

DIRECTORS

Denny Shaffer — *President*
Michele Perrault — *Vice-President*
Sanford Tepfer — *Secretary*
Phil Hocker — *Treasurer*
Marty Fluharty — *Fifth Officer*

Betsy Barnett, Brock Evans, Phillip Berry, Richard Fiddler, David Brower, Robert Howard, Larry Downing, Shirley Taylor, Ann Duff, Edgar Wayburn

Richard M. Leonard — *Honorary President*

VICE-PRESIDENTS

Phillip Berry — *Conservation Law*
Robert Howard — *Planning*
Anita Yurchyshyn — *International Affairs*
Edgar Wayburn — *Parks and Protected Areas*

REGIONAL VICE-PRESIDENTS

Jerry Akers, Michael Gillett, Judith Anderson, Mark Gordon, Carol Lee Baudler, Harold Hallett, Jim Bonfonti, Virginia-Jane Harris, Ron Burchell, Robert Hughes, David Finkelstein, Robert Pyle, Wayne Gagne, Cy Rhode

Sue Merrow — *Council Chair*

Michael McCloskey — *Executive Director*

SIERRA STAFF

James Keough — *Editor*
Annie Stine — *Associate Editor*
Gene Coan — *News Editor*
Jonathan F. King — *Copy Editor*
Keiko Ohnuma — *Editorial Assistant*
Martin C. Miller — *Editorial Intern*
Linda K. Smith — *Art and Production Manager*
Bill Prochnow — *Designer*

Kate MacIntyre — *Advertising Manager*
Gary Eagling — *Sales Representative—Midwest and West*
Alice Weaver — *Sales Representative—East*
Lorraine Vallejo — *Classified Advertising*
Mark Wismer — *Advertising Assistant*
Margaret W. Rowlands — *Distribution Assistant*

EDITORIAL, ADVERTISING AND BUSINESS OFFICES: 530 Bush Street, San Francisco, CA 94108. East Coast Advertising: 228 East 45th St., New York, NY 10017; (212) 682-1257. Midwest and West Coast Advertising: 6700 Warner Ave., Huntington Beach, CA 92647; (714) 842-9822. Unsolicited manuscripts and photos must include a self-addressed, stamped envelope; we suggest that photo submissions be insured or registered. *Sierra* is not responsible for material lost or damaged in the mail.

CLUB OFFICES

ALASKA: 241 E. 5th Ave., Suite 205, Anchorage, AK 99501
NORTHERN CALIFORNIA/NEVADA: 6014 College Ave., Oakland, CA 94618
CANADA: Sierra Club of Western Canada, #312, 620 View St., Victoria, B.C. V8W 1J6; Sierra Club of Ontario, Room 308, 47 Colborne St., Toronto, Ontario M5E 1E3
MIDWEST: 214 N. Henry St., Suite 203, Madison, WI 53703
NEW YORK & INTERNATIONAL: 228 East 45th Street, New York, NY 10017
NORTHERN GREAT PLAINS: Box 1078, Lander, WY 82520 and 421 S. 9th St., Lincoln, NB 68508
NORTHWEST: 1516 Melrose Ave., Seattle, WA 98122
SACRAMENTO: 1228 N St., Suite 31, Sacramento, CA 95814
SOUTHEAST: P.O. Box 11248, Knoxville, TN 37939
SOUTHERN CALIFORNIA: 2410 Beverly Blvd., Los Angeles, CA 90057
SOUTHWEST: 2315 Broadway, Boulder, CO 80302 and 615 South 300 East, Salt Lake City, UT 84111
WASHINGTON, D.C.: 330 Pennsylvania Ave., S.E., Washington, DC 20003

A Changing of the Guard

Just about nine years ago Frances Gendlin became the editor of this magazine, then called—as it had been for some 70 years—the *Sierra Club Bulletin*. In the June/July 1975 issue, her first, she wrote an editorial much like this one, in which she introduced herself and announced some of the plans she had for the magazine. Fran has now left *Sierra* for a job in New York, but not before accomplishing much of what she set out to do.

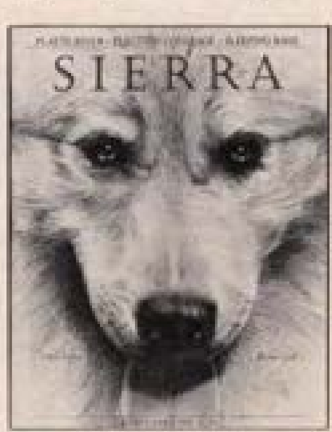
In that editorial, Fran talked about the magazine's role in nourishing a "national network of involved and knowledgeable people." She also talked about her plans for changing the magazine "to get the most from what resources we have." During her tenure as editor, she succeeded on both counts. Articles by well-known authors and the work of famous photographers soon became *Sierra*'s standard fare. Fran was also a master at both stretching the magazine's scant resources and increasing them steadily through advertising sales.

Fran created new departments, sought out excellent feature writers, experimented with printers and paper—always with an eye toward improving the magazine and delivering more to you, the reader. And she did this without changing the cost of the magazine to each member.

At its February 1984 meeting, the Sierra Club's Board of Directors adopted a resolution expressing its "deepest appreciation and gratitude" for Fran's devotion to the Club. With regard to her accomplishments the resolution reads, "She has improved immeasurably the quality, content, and reputation of the magazine; she has transformed it into the nation's most relevant magazine of conservation advocacy." All of us at *Sierra* wholeheartedly join the Board in wishing Fran every success in her new position as executive director of the Association of American University Presses.

As *Sierra*'s new editor I plan to continue the magazine's steady growth and improvement, a process that Fran set in motion nine years ago. I won't be doing it alone. *Sierra* has an excellent staff, each member of which contributes to the magazine's overall quality. Together we'll work to make the magazine look and read better with each successive issue.

I'll also have the help of a number of our readers—or at least I hope I will. In two weeks or so, 1,000 of you will receive a readership survey that will ask you to critique this issue of *Sierra*. I encourage you to take time to fill out the survey and return it to us. We'll use the results to gauge your opinion of the magazine and to plan articles for upcoming issues.



Don't be disappointed or feel slighted if you don't receive a survey this time around. We'll be sampling reader opinion of the next two issues as well, so there's a good chance you'll be included in one of those mailings. Of course, there's no need to wait for a formal invitation to tell us what you think. *Sierra* is your magazine. If you've got comments or criticisms about it, drop me a note and tell me what you're thinking. I'm eager to hear from you. —*James Keough*

Letters

Earth Day

To find out "What happened to Earth Day?" ("Questions & Answers," March/April 1984) requires one to ask: What is Earth Day and when is Earth Day?

The celebration of the first Earth Day was initiated in San Francisco in October 1969. Its purpose was to provide a truly international holiday dedicated to the care of the Earth. The day chosen for this event was March 21, the vernal equinox: a time of equilibrium, ancient memories of reverence for life in Stonehenge, Persia, China, and America, and the first day of spring in the Northern Hemisphere.

Initial sponsors for Earth Day included the cities of San Francisco and Berkeley, the University of California at Davis, the San Francisco Junior Chamber of Commerce, the Ecology Center in Berkeley, the Red Cross, plus schools and churches. The Earth Day Committee included Cathy Wayburn, daughter of former Sierra Club President Edgar Wayburn, who announced plans for Earth Day in a speech at the National UNESCO Conference in San Francisco in November 1969.

At that conference were organizers of the "Environmental Teach-In" planned for April 22. They then changed the name of their event to Earth Day—and usurped the concept without a word to us of what they were doing. Their full-page ads in *The New York Times* and the *Washington Post* captured the media's attention and ignored the March event.

Earth Day was celebrated in California on March 21, 1970. It included an amazing 12-hour "Vigil of Creation" at Davis. Later, on April 22, Earth Day became a national happening (a really wonderful event), without many participants knowing the date was bogus and the name a borrowed one.

The original Earth Day has continued each year on March 20-21. United Nations Secretary General U Thant gave us his full support and rang the U.N. Peace Bell on Earth Day 1971. In 1972 there was a 12-hour "E Day" special on 60 television stations. President Ford proclaimed Earth Day 1975. Astronaut Edward Gibson rang the U.N. Peace Bell on Earth Day 1980—the year the April 22 organization tried again to replace the original Earth Day.

This year, on March 20, we observed the 14th Earth Day Ceremony at the United Nations. The Peace Bell was rung just before dawn, at 5:25 a.m.—the moment of the equinox. This was followed by two minutes of silent prayer or meditation—a moment of dedication to the care of Earth in the coming year. I was aware at that moment of groups on every continent joining together in love of Earth—its life, its people—with deepened devotion to its care.

John McConnell, President
Earth Society Foundation
New York, N.Y.

Population and the Democrats

In "The Democratic Candidates & the Environment" (March/April 1984) there is a serious omission from the range of issues on which the candidates' stands are evaluated. In the past your magazine has commented on the underlying significance to all environmental causes of the exponential increase in world human population; inexplicably this understanding is absent from the current survey of the candidates' attitudes. In the future, I hope, you will recognize our failure to prevent population growth as a basic cause of all our environmental concerns today.

L.M. Passano
Professor of Zoology
University of Wisconsin—Madison

Protection for the Poudre

In general I found the article on "Wilderness Whitewater Rafting" by Ron Watters in the March/April issue to be informative and interesting. However, in the accompanying list ("A Raft of Rivers to Run") the inventory of freshets in Colorado was lacking one that is very important to the Sierra Club's northern Colorado members.

As the only remaining river along the Front Range to be recommended for designation as a wild-and-scenic river by a Forest Service study a few years ago, the Cache la Poudre has become embroiled in a local controversy.

With its headwaters in Rocky Mountain National Park, the Poudre has become popular with rafters and kayakers all the way down to Denver, even though its peak runoff period lasts for only about one to two months during the late spring. In response to rising interest in wild-and-scenic designation for the Poudre, the Colorado legislature authorized a comprehensive study of Poudre Canyon, the best recreation section, as a site for dam projects. After thoroughly exploring more than a half-dozen alternatives, the Tudor Engineering Co. determined that no combination of storage reservoirs would be economically feasible under current (or foreseeable future) conditions of resource demand and capital availability. Not content with such a definitive recommendation, those organizations and institutions that stand to profit the most from reservoirs—chiefly the farmers of Weld County and the city government of Greeley—have remained the most stubborn obstacles to protection for this remnant of our natural heritage along the rapidly congesting east slope of the Rockies.

With demand for development a distant-enough threat, the river's whitewater will probably weather neglect by our duly elected representatives for a while longer. But if something positive isn't done before a few more years pass, omission of the Cache la Poudre from whitewater-river lists will not be inadvertent.

Bradley Edwards
Ft. Collins, Colo.

Seeing Reagan Clearly

I know many people who are very conscientious and concerned about the environment and wildlife, but who will probably vote for Reagan's reelection on the basis of other issues—unless they see clearly how horrible his administration has been and how dismal another four years would be.

Could you please publish a concise, unemotional, factual summation of all the atrocities, attempted atrocities, and proposed atrocities against the environment committed by this administration? I don't think many people really know how vicious Reagan has been.

Jon Harris
Berkeley, Calif.

For a review of the last four years (and predictions of what the next four under Reagan could bring), see page 51 of this issue.

Political Endorsements

I feel compelled to comment on the interview with Sierra Club President Denny Shaffer in the March/April issue of *Sierra*. I am particularly concerned about his statement that the Club endorses political candidates based solely on their environmental

records. I fear that the persistence of the "John Muir mentality" is no longer appropriate in light of the complexities of the real world as it exists today.

While I certainly have no quarrel with a singleminded dedication to the preservation of our diminishing natural resources, I'm not sure this is any longer a viable approach. Isn't it about time the Sierra Club emerges from its "save the frontier" philosophy and gets with it? I don't have any clever answers as to how this should be accomplished. I do have an uneasy feeling that it can't be done by ignoring the larger social structure of Planet Earth, nor by simply supporting "less than perfect" politicians who mouth support for environmental issues.

Theodore Franklin
Marina del Rey, Calif.

Elitist RVers

"Despite what some of those elitist snobs in the Sierra Club assert, a high-quality natural outdoor experience is not only definitely possible in a recreational vehicle, but it's also made even better by the fact that an RVer can enjoy the elements *and* some of the comforts of home as well."

This gratuitous remark—much more elitist than anything I've ever heard on a mountaintop—comes from an editorial by Dennis Rouse, the publisher of *Trailer Life* magazine, in that publication's April 1984 issue. Many members of the Sierra Club are also owners and users of recreational vehicles, and they should be aware of this violent anti-Sierra Club position taken by a high official of TL Enterprises—which encompasses, in addition to its magazine, a book-publishing division, the Good Sam Club, and a tie-in to Outdoor Resorts of America through Art Rouse, the chairman. Sierra Club members who are connected with any of these activities should write to Dennis Rouse (29901 Agoura Rd., Agoura, CA 91301) to demand an apology.

J.A. Sutherland
Bishop, Calif.

Problems in the Grasslands

Your coverage of the Sierra Club's efforts in support of the "Sodbuster Bill," S. 663 ("News," January/February 1984), leads the reader to believe that this is primarily a soil-conservation issue. Unfortunately, this is far from being the case. While it is true that the massive conversion of grasslands to cropland is, even now, posing serious erosion problems, it should be noted that many of these lands consist of native prairie that has never before been under cultivation. What is at stake in these instances is the complete

THE PERCEPTIBLE DIFFERENCE:

IT'S EASY TO SEE.

The Mirrycle® rear view mirror looks good. But it works even better. Because the people who put it together know what it's like to tour cross country one day and be downtown dodging city traffic the next. They understand because they've pedaled down the same streets and highways you have.

BETTER VISION THROUGH INTELLIGENT DESIGN.

The Mirrycle: The first bicycle mirror designed exclusively for drop style handlebars, combines a large field of view (a 3" convex mirror) with a unique hollow bolt mounting system that lets you use the entire handlebar in all riding positions, including the drops. And because the mirror is mounted on the bicycle permanently, it's hard to lose and easy to use. When you notice the thoughtful design refinements, like the long lasting threaded inserts, the washered joints for easy adjustment without binding, and the solid attachment of the mirror, you'll be able to tell the Mirrycle was made by another bicyclist like you.

THINKING THE UNTHINKABLE.

Unpleasant as it is, everybody goes down sooner or later. That's when having the Mirrycle on the bicycle instead of the rider makes even more sense. And you'll appreciate the fact that this durable polycarbonate mirror is designed to absorb a blow by pivoting on impact.

IT'S A MIRRYCLE.

Whether touring or commuting, it's easy to see that the Mirrycle was developed with your comfort and cycling safety in mind.

See for yourself, ask for a Mirrycle at your bike shop.

Mirrycle Corporation
P.O. Box 2157
Boulder, Colorado 80306
U.S.A.

MIRRYCLE®

© 1984 Mirrycle Corporation

obliteration of the local ecosystem—wildlife as well as vegetation—along with the destruction of previously undisturbed archaeological and historic sites.

In its impact on soils, plant and animal communities, and cultural resources, the assault on the surviving native grasslands of western North America is more akin to the massive deforestation taking place in Asia, Africa, and South America than to a simple issue of soil conservation. I cannot help but think that if these lands were located in more populated areas or more closely approximated the popular ideal of a scenic landscape, these outrages would have had front-page coverage in the environmental press.

Dennis C. Joyes
Toronto, Ont.

While it isn't quite front-page coverage, an article on attempts to preserve the tallgrass prairie begins on page 72 of this issue.

Mining Michigan's Dunes

Before I retired my copy of the January/February issue of *Sierra*, I flipped through the pages one more time to make sure there wasn't any more good reading.

I wish I hadn't done it.

Being a born-and-raised Michigander, the article about the proposed mining of the Bridgman Dunes ("A Dubious Tradeoff") sent chills up my spine. It is appalling as well as unethical the way Martin Marietta and Unimin Corp. see fit to rape the picturesque natural resources of the Great Lake State—one of the few things that troubled area can boast about.

Dan T. Flory
West Chester, Penn.

The Wolf and Human Will

"Reprieve for Minnesota's Wolves" by Odean Cusack (March/April 1984) hit home for me, because I'd just seen the film *Never Cry Wolf*. How can man wish to destroy such a beautiful animal? It seems as though man is always forcing his will on "subordinate" creatures.

Yet "wolfkind" is more similar to mankind than we give him credit for. The fact that man could arbitrarily reassign the "threatened" wolf to the category of a game species—simply because the wolf has crossed man's will and interrupts his life on occasion—frightens me. Where might such a trend lead? If man cannot learn to share the earth with other species, how can we expect him to coexist with other individuals of his own species?

Susan Ripley Rodgers
Clifton Heights, Penn.

Questers for 1984

Travel with a purpose. Learn and discover. Search out plants and animals, birds and flowers. Explore rain forests, mountains and tundra, seashores, lakes and swamps. With Questers you will have ample time to photograph, absorb and reflect. Naturalist guides, small tour parties, first-class accommodations.

Worldwide Nature Tours
1984 Departures

The Americas

Okefenokee Swamp: 12 days, 4/15 • **Hawaii**: 15 days, 2/9, 3/22, 10/18, 12/20 • **Alaska**: 17 days, 6/22, 7/10, 7/28 • **Pacific Northwest**: 12 days, 6/18, 8/6 • **Superior Forest Canoe Trip**: 9 days, 7/7, 8/11 • **Canyon Lands**: 14 days, 5/6, 10/7 • **Manitoba (Churchill)**: 12 days, 6/25 • **Newfoundland**: 16 days, 6/10 • **Canadian Rockies**: 15 days, 6/9 • **Southern Mexico**: 15 days, 2/12, 3/11, 11/4, 12/16 • **Panama & Costa Rica**: 14 days, 2/13, 3/19, 12/24 • **The Amazon**: 17 days, 1/8, 3/4, 5/6, 7/8, 8/5, 11/18 • **Ecuador & Galapagos**: 16 days, 2/1, 4/4, 7/18, 8/8, 10/31, 12/12 • **The Galapagos**: 17 days, 1/23, 2/6 • **Peru**: 17 days, 7/15, 11/4 • **Patagonia/Tierra del Fuego**: 22 days, 1/9, 11/5 • **Trinidad & Tobago**: 11 days, 3/19, 4/2, 11/5, 11/19.

Europe

Iceland: 16 days, 6/15, 7/6, 8/10 • **Ireland**: 23 days, 5/9 • **Islands/Highlands of Scotland**: 21 days, 5/31, 7/12 • **Switzerland**: 17 days, 7/13, 8/10 • **Greece**: 19 days, 4/2, 9/17.

Asia & Africa

Japan: 23 days, 6/1 • **Sri Lanka**: 18 days, 2/17, 7/6, 11/16 • **Himalayas**: Nepal, Sikkim & Bhutan: 23 days, 3/15, 10/11 • **Foothills of Western Himalayas**: 19 days, 4/12 • **Kenya**: 22 days, 2/2, 7/19, 10/18 • **Madagascar, Mauritius & Reunion**: 24 days, 7/8, 10/7

Oceania & Australasia

Australia & New Zealand: 28 days, 2/11, 10/6 • **New Zealand & the Milford Track**: 22 days, 2/10, 11/16 • **Papua New Guinea**: 23 days, 5/19, 8/11, 11/3

Write for the 1984 Questers Directory of Worldwide Nature Tours. If a particular tour strikes your fancy, ask for its Detailed Itinerary.

QUESTERS
Worldwide Nature Tours
Dept. SA, 257 Park Avenue South
New York, NY 10010 • (212) 673-3120

Sponsored by
The National Audubon Society
and
The National Wildlife Federation

The 50th Anniversary Edition

Roger Tory Peterson FIELD GUIDES

The Most Important Natural History Library Ever Created

Bound in rugged, genuine leather and accented with 22kt gold.

Books shown much smaller than actual size of 4¾" x 7½".

(continued on next page)

(continued from previous page)

The 50th Anniversary Edition

Roger Tory Peterson FIELD GUIDES

Bound in rugged, genuine leather and accented with 22kt gold

The Most Important Natural History Library Ever Created

In 1934, Roger Tory Peterson saw a dream come true…he was twenty-five and an unknown artist. Yet, he was on the brink of making publishing history — with a single book that would turn bird watching and the appreciation of nature into one of the most popular pastimes in America.

That book? **A Field Guide to the Birds** which, in its first week of release, was a sell-out. And recently, revised and updated, this book has again climbed the best seller lists — acclaimed as always, "the most successful and influential bird book of all time."

If the story ended here, this would be forever exciting. But more books followed … a breathtaking array of Roger Tory Peterson Field Guides — written by Peterson and leading experts — covering the full spectrum of nature: **Birds, Butterflies, Wildflowers, Sea Shells, Stars and Planets, Weather and Atmosphere, Trees and Shrubs, Coral, Rocks and Minerals, Freshwater Fish** — some 33 titles in all. Together, they unlock the whole world of nature — enabling you to see, know and identify all of nature's wonders immediately by sight and by name.

Yet, until now, acquiring this complete collection has been difficult to do

Surprisingly, you may search any number of book stores and find only a handful of Field Guides at any one time. Book stores today simply cannot afford to carry the necessary depth of stock. Those you do locate will usually be offered in a paperback version — nice enough, but probably not what a book lover had in mind.

Now — a 50th anniversary "lifetime" edition

Now, for the first time ever, all of these landmark works are being gathered together into the most complete, comprehensive and up-to-date Natural History Library ever created. And, in honor of their 50th anniversary year, this complete collection of Roger Tory Peterson Field Guides — for the first time ever — will be **bound in rugged, beautiful, genuine leather, housed in a hardwood display case and contain a volume autographed by Dr. Peterson.**

The Easton Press has created an edition of superb quality. Each Guide is bound in beautiful, ruggedly supple leather. Each weather resistant cover is deeply embossed with a golden design. A ribbon marker is sewn into each binding. And the papers used are groundwood-free, made to capture the full-color fidelity of illustrations. Each is thread-sewn to last for generations. You, your children and their children can know the lifetime rewards of a personal knowledge and love of nature.

Each Guide is a convenient 4¾" x 7½" size.
The rugged leather covers are flexible — easy to handle and use.

A Peterson autographed edition with selected new and original art work.

Dr. Peterson, America's greatest living bird artist, at his Connecticut studio.

This hardwood display case will be provided at no additional charge.

An autographed edition

Roger Tory Peterson, a man who has earned numerous awards, including The Presidential Medal of Freedom, is generally acclaimed as the greatest bird artist since John James Audubon. His original art works command premium prices if, and whenever, they are offered for sale. Now you, too, can share the pride in owning a stunning, new frontispiece illustration created especially by Roger Tory Peterson, and faithfully reproduced in this edition. And throughout the collection, key illustrations chosen by Peterson from the archives will be newly added to the Guides. You will also receive the classic **A Field Guide to the Birds** signed personally by Dr. Peterson.

Attractive hardwood display case free of additional charge

This collection will create an exciting presence in your home. And your collection will have a proper setting! At no additional charge, you will receive an impressive hardwood display case, allowing you to show your books to their best advantage, while lending warmth and dignity to your home.

Available exclusively from The Easton Press

The authorized 50th anniversary leather-bound edition will be available exclusively from The Easton Press. None will be sold in book stores. The remarkably favorable price for each volume is only $29.50 — extraordinary, indeed, when you compare this beautiful edition to today's rather expensive paperback and hardcover books.

You need send no money now. Simply complete the Preferred Subscription Reservation below and mail it today. Your Guides will be shipped to you at the convenient rate of one per month. You will be billed with each shipment, or you may have your volumes charged, as shipped, to your VISA or MasterCard. You must be pleased with each volume you receive or you may return it within 30 days for a full refund. You may also discontinue your subscription at any time.

Prompt action required

Considering the importance of this 50th anniversary edition, you are urged to mail your reservation promptly to avoid any later disappointment. Initial production quantities must soon be established and, once met, this special edition may not be offered again.

Sponsored By The National Audubon Society And The National Wildlife Federation

The Roger Tory Peterson Field Guides have earned the sponsorship of both the National Audubon Society and the National Wildlife Federation. Both prestigious organizations are noted for their dedication to conservation, and the protection of America's wildlife and natural resources. The Peterson Field Guides, perhaps more than any other books on nature, have stimulated personal awareness of nature's infinite beauty and of man's responsibility to his natural world.

The Peterson Guides: The Best in the Field

The secret to the Guides' success is that nothing is left to guess work. Fifty years ago, Roger Tory Peterson developed a startlingly new and simple method of identifying the wonders of nature. It employs the use of distinguishing "field marks" including illustrations of comparisons between similar species. Nature lovers have delighted at how easy it is to follow the "Peterson System." Other guides have become available — but it is only The Roger Tory Peterson Field Guides that endure in unparalleled importance — because they're accurate, complete and easy to use.

Preferred Subscription Reservation 019

ROGER TORY PETERSON FIELD GUIDES

The Easton Press
47 Richards Avenue
Norwalk, Conn. 06857

No Payment Required.
We will bill you.

Please send me the first volume of the **Roger Tory Peterson Field Guides** bound in genuine leather and reserve a subscription in my name. Further editions will be sent at the rate of one book per month at $29.50* each. This price will be guaranteed for the next two full years. I understand that I may return any book within 30 days for a refund, and that either party may cancel this subscription agreement at any time.

*Plus $2.50 per book for shipping and handling.

☐ As a convenience, I wish to pay for my first book now. I enclose $29.50 (plus $2.50 shipping and handling — a total of $32.00**).

☐ Please charge each monthly shipment to my credit card:

☐ Visa ☐ MasterCard

Credit Card No. ____________ Expiration Date

Name ____________

Address ____________

City ____________

State ____________ Zip ____________

Signature ____________

**Conn. residents pay $34.40 to include sales tax. Please allow 8-12 weeks for shipment.

Backpack to boil in under 5 minutes.

The Peak 1® stove is ready when you are.

There's nothing to assemble. Controls are easy to use, even when you're wearing mittens. And you get performance without priming in all but the coldest weather.

The result? Less than five minutes from when you pull it out of your pack, the Peak 1 stove will fire up to a boil at 8,500 BTUH input.

Then it fine tunes to a simmer for real cooking flexibility.

To top it off, the Peak 1 stove also features an integral pump that gives you plenty of pressure for melting snow and making meals at high altitudes. A built-in crisscross windshield that works even when the wind shifts suddenly. And it burns quietly to let you enjoy the serenity of the outdoors.

Pack the performance gear. Look for this stove along with the full line of Peak 1 equipment, including sleeping bags filled with Quallofil* and Hollofil II,® new outerwear and state-of-the-art Cordura® frame packs. For more information and a free color catalog, write to Peak 1, Dept. 678-05, Box 1762, Wichita, KS 67201.

*Quallofil is a DuPont certification mark. Hollofil II and CORDURA are registered trademarks of DuPont.

Performance at its peak.

© 1984 The Coleman Company, Inc.

A Banner Year for Wilderness?

After three years of behind-the-scenes work, conservationists across the nation may be successful in their efforts to establish new national-forest wilderness areas in more than 20 states. Between 6 million and 10 million acres of wilderness may be added to the National Wilderness Preservation System this year.

The first wilderness bill to reach the President's desk will be the 16,500-acre Irish Wilderness in Missouri. The focus of a 20-year citizens' campaign, the legislation was finalized by a House-Senate conference committee in April.

ACTION IN THE SENATE

Many state wilderness bills that have been stalled in the Republican-controlled Senate are now beginning to move. House-passed bills for forest wilderness in New Hampshire, Vermont, Wisconsin, and North Carolina were approved in committee in March and are expected to pass the Senate in May, as is the House-passed Arizona Wilderness Act. An Alabama bill, passed by the House last June, also awaits Senate action.

Wilderness bills for the states of Oregon and Washington are ready to be considered by the Senate Energy Committee, but are caught in the final rounds of a procedural dispute. The 1.2-million-acre Oregon bill was passed by the House in March 1983 and could reach the President in May. The 1-million-acre Washington Wilderness Act has been agreed to by the House delegation, and should move promptly through the House once the Senate acts.

These and other bills have been held up in the Senate by the resistance of Senators James McClure (R-Idaho) and Malcolm Wallop (R-Wyo.) to a generally agreed-upon formula for "releasing" certain roadless national forest lands for development. The two senators advocate an approach that would basically condemn these lands to development without practical opportunity for future evaluation as wilderness.

TROUBLE FOR IDAHO, WYOMING

It is possible, however, that two antiwilderness bills may be swept along by this momentum. Sen. McClure's Idaho Forest Management Act and Sen. Wallop's Wyoming Wilderness Act would open as much as 5 million acres of citizen-proposed wilderness for immediate development. "At stake are classic Rocky Mountain wilderness lands and wildlife of extraordinary national significance," said Michael McCloskey, the Sierra Club's Executive Director. "The narrow, unbalanced approach of the Wyoming and Idaho congressional delegations has led them to propose far less wilderness than is sought by their own state fish and game departments, the governors, the Forest Service, and Idaho and Wyoming conservationists." The Club is mounting a major effort to block passage of these two bills.

WILSON IMPEDES CALIFORNIA WILDERNESS ACT

California's statewide national-forest wilderness bill has passed the House three times in the last five years. The bill has been slowed in the Senate this session by the cautious, noncommittal approach of Sen. Pete Wilson (R-Calif.). Wilson's proposal of 1.7 million acres of wilderness (compared to the House-passed 2.3-million-acre bill) has been rejected by California conservationists, Sen. Alan Cranston (D-Calif.), and House leaders. Wilson would exclude crucial wildlands from the proposals for the Granite Chief and Trinity Alps wilderness areas and from proposed additions to the Yolla Bolly-Middle Eel Wilderness. The deadlock could force every forest roadless area in California to undergo a new round of wilderness study in 1985 and 1986.

PROGRESS IN OTHER STATES

Two other western states may have forest-wilderness bills this year. Leaders of the Sierra Club's Utah Chapter are working for improvements in the wilderness bill now before Congress. Changes are particularly needed to protect the Box-Death Hollow area in the headwaters of the Escalante River and the High Uintas, the largest still-to-be-designated forest-wilderness unit outside of Alaska.

In Colorado, conservationists hope to see substantial improvement in an inadequate House bill sponsored by retiring Rep. Ray Kogovsek (D-Colo.).

The Sierra Club is also working for passage of wilderness bills for Florida, Arkansas, South Carolina, Tennessee, Texas, Pennsylvania, Michigan, and Virginia.

FIRST BLM WILDERNESS

Although some small areas of public lands administered by the Bureau of Land Management (BLM) have been designated as

Senate Committee Clears Air Bill

Strong limits on the sulfur-dioxide emissions of coal-burning power plants are part of the Clean Air Act reauthorization bill approved by the Senate Energy & Public Works Committee on March 13. Recognizing sulfur dioxide as the major cause of acid rain, the bill would require coal-burning facilities in the East and Midwest to reduce such emissions by 10 million tons over the next decade. The legislation, S. 768, also directs the Environmental Protection Agency to decide whether to regulate at least 39 airborne hazardous pollutants by 1990. The full Senate is not expected to act on S. 768 until the House moves its version of the bill beyond the subcommittee stage.

Instead of owning a cam
maybe you need a cam

In a world full of cookie-cutter SLRs, Nikon introduces the world's

Over the years millions of people have bought millions of SLRs designed for beginners.

But what happens when you don't want to take pictures like a beginner anymore?

Many stick with their mass-produced SLR and wonder why they can't get better results.

For the few, however, who are determined to improve as photographers, Nikon has created an engineering marvel called the FE2. An automatic SLR so different, there are no other cameras to compare it with.

For instance, take the matter of Selective Focusing. Which is the ability to vary apertures to express your impression of the subject. An absolute must for anyone who wants to improve as a photographer.

The FE2 gives you more options for Selective Focusing than any other 35mm SLR in the world.

To begin with, the FE2 is an aperture-priority automatic. So you have total control over depth of field when you shoot in automatic.

But, as we said, that's just the beginning.

The FE2 is the first 35mm automatic with a 1/4000 shutter speed. An innovation made possible by Nikon's development of an ultra-thin honeycomb titanium shutter. It means photographers like yourself will, for the first time, be able to use a full range of apertures in bright sunlight. And because the FE2 is faster than any other 35mm automatic, it gives you greater control over exposure than other cameras when using the

If you love photography, don't miss Nikon's "The Photographer's Eye" on SPN Cable TV. Check local listings. For further information write Dept. 50, Nikon Inc., 623 Stewart Ave., Garden City, N.Y. 11530. © Nikon Inc. 1983.

era designed for millions
era engineered for a few.

fastest 35mm SLR automatic. The FE2.

latest 1000 ASA color print film.

The FE2 is also the only 35mm automatic with a 1/250 flash synch speed. Which means you'll have the ability to select a wider range of lens apertures when taking flash pictures outdoors. An achievement that was once considered impossible with a 35mm SLR.

In addition, the FE2 is one of the few cameras equipped with through-the-lens flash metering (TTL). Which gives you unparalleled accuracy because flash exposures are measured by the camera as they pass through the lens. And not by a sensor on the flash unit itself. TTL allows you to achieve virtually unlimited aperture settings when shooting flash indoors with a dedicated Nikon Speedlight.

Even when you're not taking photographs with the FE2 it's an astonishing camera. Its balance and 'feel' make other SLRs seem bulky and unresponsive. And its copper silumin aluminum body makes it one of the most rugged Nikons ever made.

So while other cameras are designed for millions, the FE2 is engineered to take the kind of pictures only a few strive for.

One-in-a-million.

Nikon

We take the world's greatest pictures.™

wilderness as part of other units, 1984 may be the first year of legislative progress for BLM wilderness. A number of BLM units totaling almost 300,000 acres are included in the House-passed Arizona Wilderness Act. New Mexico conservationists still hope for action on the San Juan Basin Wilderness Protection Act, which would protect BLM wilderness-study areas threatened by federal coal development. Despite overwhelming public support in New Mexico and at hearings in Washington, D.C., action on the bill is stalemated because of lack of support from Sen. Pete Domenici (R-N.M.).

Government Will Appeal Wolves' Courtroom Victory

Just five minutes before the filing deadline on March 2, the Interior Department appealed the January 5 ruling by a U.S. District Court judge in Minnesota against a controversial plan that would have permitted sport hunting and trapping of wolves as a population-management technique in the state. (See "Reprieve for Minnesota's Wolves," March/April 1984.) The case now goes to the 8th Circuit Court of Appeals in St. Louis.

Brian O'Neill, attorney for the coalition of environmental groups (including the Sierra Club) that has been fighting the government's proposed regulation changes, anticipates that the case will be argued in midsummer. Buoyed by the strength of the District Court decision, environmentalists are confident it will be upheld on appeal.

Coal Commission Delivers Verdict

James Watt's Interior Department was found guilty of several counts of mismanagement by the Commission on Fair Market Value Policy for Federal Coal Leasing, a panel that Watt himself appointed last year at the direction of Congress.

While early drafts of the commission's investigation into the federal coal-leasing program reflected the Watt/free-market bias, the final report concluded that Watt "sought to lease too much coal" and as a result did not receive fair market value in the 1982 Powder River sale. The commission charged that the coal-leasing program is haphazard and administered by people who often lack the necessary expertise and information to do their jobs suitably. And, in a finding that surprised many observers, the commission challenged the free-market approach to coal leasing, saying that large-scale leasing of coal will in no way lead to efficient distribution of resources.

In his official response to the commission's criticisms, Interior Secretary William Clark announced that no major coal sales would be held during this calendar year. He also agreed to rewrite the regulations governing coal leasing on federal lands.

In a letter to Clark delivered before his announcement, the Sierra Club recommended that the department cancel the four major western coal sales that are currently planned and reformulate them under revised procedures; establish a reduced sales schedule for future offerings; and reinstitute the environmental standards, provisions for public participation, and planning requirements discarded under Watt.

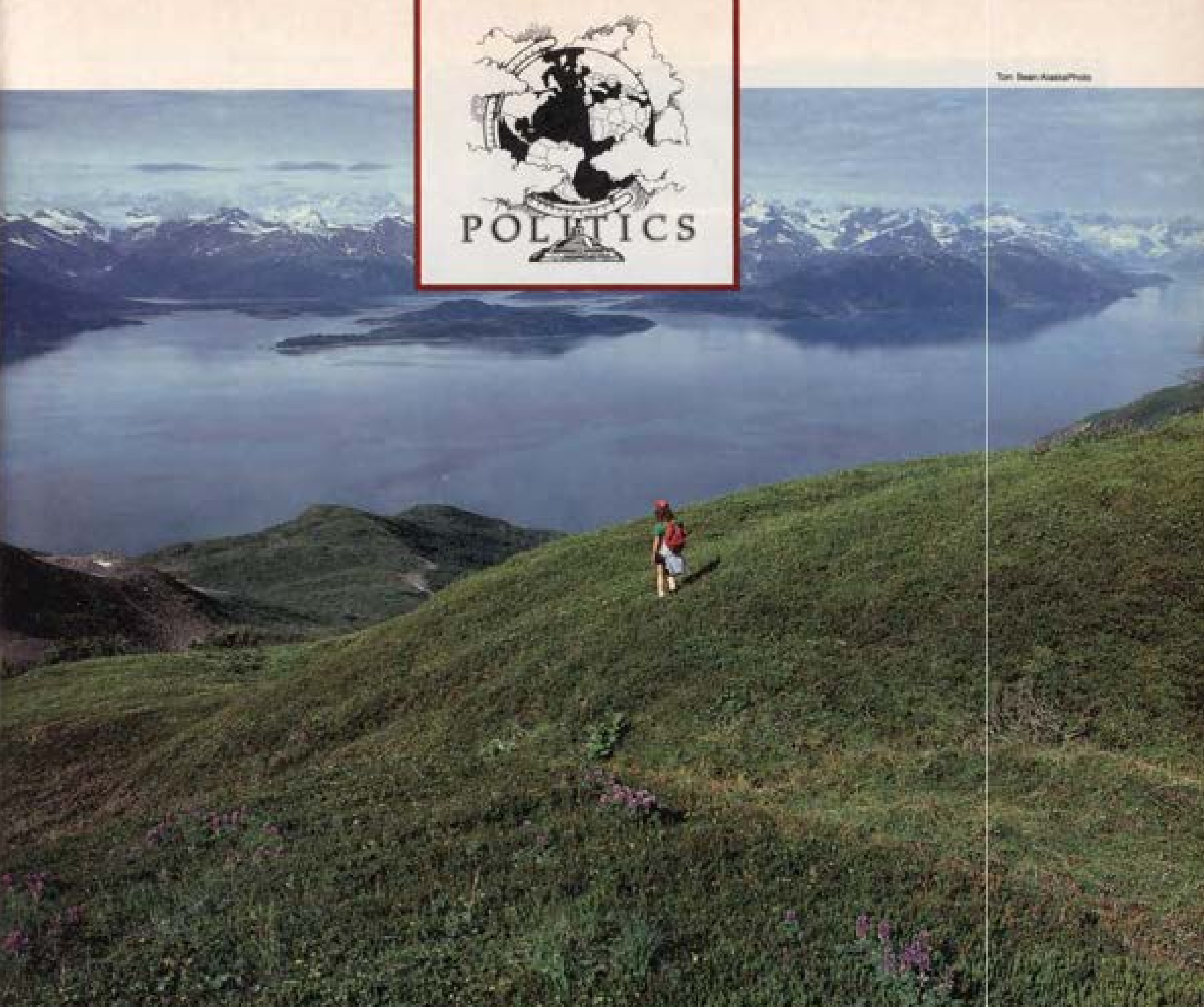
Club Files Acid Rain Lawsuit Against EPA

Not only is the Reagan administration opposing new legislation to control acid rain, but it is refusing to carry out existing law, the Sierra Club has claimed in a lawsuit filed against the Environmental Protection Agency. The Club, along with three other environmental organizations and six northeastern states, filed suit against the EPA on March 20 for its failure to implement the acid rain controls mandated under the current Clean Air Act.

Based on provisions in the act designed to control pollution that crosses state and national boundaries, the suit asks that the EPA be required to rule on three petitions filed in 1981 in which northeastern states complained of serious environmental harm from acid rain originating in the Midwest. The plaintiffs also ask that the agency be ordered to issue formal notification to those midwestern states responsible for acid rain damage in Canada. (In 1981 the EPA determined that the U.S. is largely responsible for acid rainfall in Canada.)

Once the agency has issued the ruling and notifications requested by the lawsuit, midwestern polluters would be required to cut back sharply on their emissions of sulfur dioxide and nitrogen oxides, the primary causes of acid rain.

The Sierra Club is joined in the suit by the Natural Resources Defense Council, the National Wildlife Federation, the National Audubon Society, and Rep. Richard Ottinger (D-N.Y.). The states involved are New York, Maine, Vermont, Rhode Island, Connecticut, and Massachusetts. Howard Fox of the Sierra Club Legal Defense Fund is the attorney for the environmentalists. □



The Interior Department has proposed opening previously restricted parts of Glacier Bay National Park to motorboats, floatplanes, and snowmobiles.

ALASKA'S PUBLIC LANDS

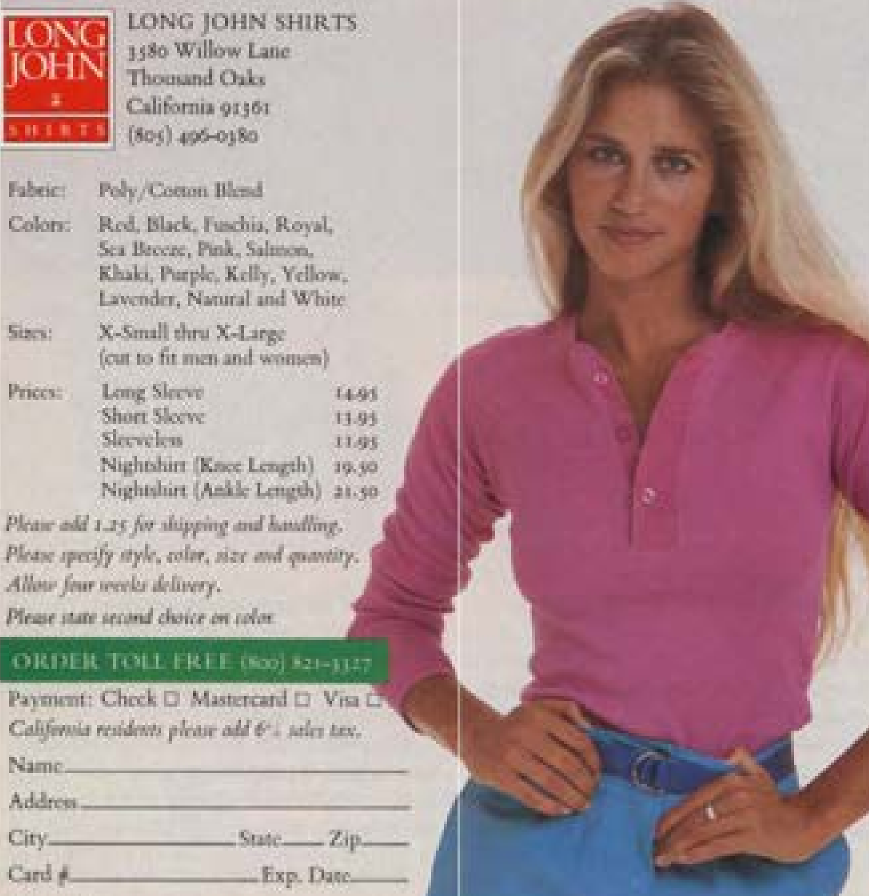
Lax Enforcement Undermines ANILCA

EDGAR WAYBURN

IT WAS HAILED AS the conservation achievement of the century. The Alaska National Interest Lands Conservation Act of 1980 (ANILCA) set aside more than 100 million acres of national parks and preserves, refuges, rivers, and wilderness areas. Another 30 million acres of existing park and refuge lands previously established by executive order were statutorily reconfirmed, so that any future changes could be made only by act of Congress.

But the saga of the law in the three and a half years since its passage is a classic example of how the intention of Congress can be subverted. The Reagan administration has pursued its anticonservation policies in Alaska through administrative measures and egregious misinterpretations of the act. Several of the people who opposed the passage of ANILCA most vigorously are part of the present administration, and these very people have been in charge of the law's initial implementation.

The wildlands of Alaska are now suffering from a host of plagues, ranging from inadequate funds for staffing and for purchasing of inholdings to management policies designed to permit resource exploitation in units of



The beaches of Cape Krusenstern National Monument contain relics of every known Eskimo culture in North America. A proposed land exchange would open 62,000 acres of the monument to lead and zinc mining.

the conservation system. Some examples:

- For fiscal year 1985 the Interior Department has requested $22.3 million for the administration of Alaskan park-system units. This figure is down $1.6 million from FY 1984 and down $4 million from FY 1983. Alaska's 51.2 million acres of parks comprise 65 percent of the total national park system, yet the $22.3 million Interior has requested for that acreage represents only 3 percent of the total budget request for the National Park Service (NPS). No funds have been requested for acquisition of inholdings, although development and sale of inholdings is the most serious threat the NPS faces in Alaska.
- The administration currently is requesting only $14 million to operate and maintain 16 national wildlife refuges in Alaska. These units cover more than 76 million acres and amount to 85 percent of the total National Wildlife Refuge System. This request represents a 4.5-percent decline from 1983 (in constant dollars) and is only 14 percent of the total budget for the refuge system. Under these grossly inadequate budgets the NPS and the U.S. Fish & Wildlife Service (FWS) will remain little more than caretakers of Alaskan park and refuge lands.
- A series of proposed land exchanges and boundary adjustments has already resulted in the filing of one lawsuit by environmentalists, and other legal actions are waiting in the wings. These exchanges and adjustments include: deleting a portion of the St. Matthew Island National Wildlife Refuge wilderness for ARCO's use as an oil and gas exploration base (the National Audubon Society is already in court over this); opening a watershed on Admiralty Island National Monument to exploitation by the Noranda Mining Company; dropping 62,000 acres from Cape Krusenstern National Monument for a Native regional corporation and its partner, COMINCO, the

The Sierra Games offers great individual prizes as well as special rebates to your Chapters and Groups. Two great reasons for you to get into the competition. A special contest membership form is on the reverse side of this insert. For additional forms, see your membership chair.

The Prizes

* restrictions apply

GRAND PRIZE* An all expense paid national outing for two plus all of the following prizes.

50 MEMBERSHIPS A signed and numbered, limited edition copy of *Alaska: Images of the Country* by Galen Rowell and John McPhee plus the prizes listed below.

DOONESBURY by Garry Trudeau

25 MEMBERSHIPS A signed Doonesbury "Wall Cartoon" by Gary Trudeau plus the prize listed below.

5 MEMBERSHIPS A 100% Cotton Sierra Games T-Shirt.

MEMBERSHIP FORM

☐ *Yes, I want to join! Please enter a membership in the category checked below.*

New Member Name ______________________________

Address ______________________ Phone ______________

______________________ Zip ______________

GIFT MEMBERSHIPS: If you are giving this membership as a gift, please enter your name and address below:

Donor Name ______________________________

Address ______________________ *Zip* ______________

GIFT MEMBERSHIP will be announced by a special gift card in your name.

☐ *Check here if you would like to be billed for renewal of this gift membership next year.*

Recommended By (optional) ______________________________

Membership No.: __________

Address ______________________ Phone ______________

______________________ Zip ______________

MEMBERSHIP CATEGORIES

	Individual	Joint	SPECIAL	CATEGORIES Individual	Joint
Regular	☐ $ 29	☐ $ 33	*Senior*	☐ $15	☐ $19
Supporting	☐ $ 50	☐ $ 54	*Student*	☐ $15	☐ $19
Contributing	☐ $100	☐ $104	*Spouse of Life*		
Life	☐ $750	*per person*	*Member (Annual Dues)*	☐ $15	

All dues include subscription to Sierra ($4) and chapter publications ($1).

Sierra Club *Dept. H814, P.O. Box 7959, San Francisco, CA 94120*

Residents of Canada, please remit in Canadian funds to:
#308 47 Colborne Street, Toronto, Ontario, M5E 1E3 (Eastern Canada)
P.O. Box 202, Victoria, British Columbia, V8W 1K8 (Western Canada)

MEMBERSHIP FORM

☐ *Yes, I want to join! Please enter a membership in the category checked below.*

New Member Name ______________________________

Address ______________________ Phone ______________

______________________ Zip ______________

GIFT MEMBERSHIPS: If you are giving this membership as a gift, please enter your name and address below:

Donor Name ______________________________

Address ______________________ *Zip* ______________

GIFT MEMBERSHIP will be announced by a special gift card in your name.

☐ *Check here if you would like to be billed for renewal of this gift membership next year.*

Recommended By (optional) ______________________________

Membership No.: __________

Address ______________________ Phone ______________

______________________ Zip ______________

MEMBERSHIP CATEGORIES

	Individual	Joint	SPECIAL	CATEGORIES Individual	Joint
Regular	☐ $ 29	☐ $ 33	*Senior*	☐ $15	☐ $19
Supporting	☐ $ 50	☐ $ 54	*Student*	☐ $15	☐ $19
Contributing	☐ $100	☐ $104	*Spouse of Life*		
Life	☐ $750	*per person*	*Member (Annual Dues)*	☐ $15	

All dues include subscription to Sierra ($4) and chapter publications ($1).

Sierra Club *Dept. H814, P.O. Box 7959, San Francisco, CA 94120*

Residents of Canada, please remit in Canadian funds to:
#308 47 Colborne Street, Toronto, Ontario, M5E 1E3 (Eastern Canada)
P.O. Box 202, Victoria, British Columbia, V8W 1K8 (Western Canada)

largest lead- and zinc-mining corporation in the world; and awarding the state of Alaska 147,000 acres of the Alaska Peninsula National Wildlife Refuge as part of the Bristol Bay Management Plan.

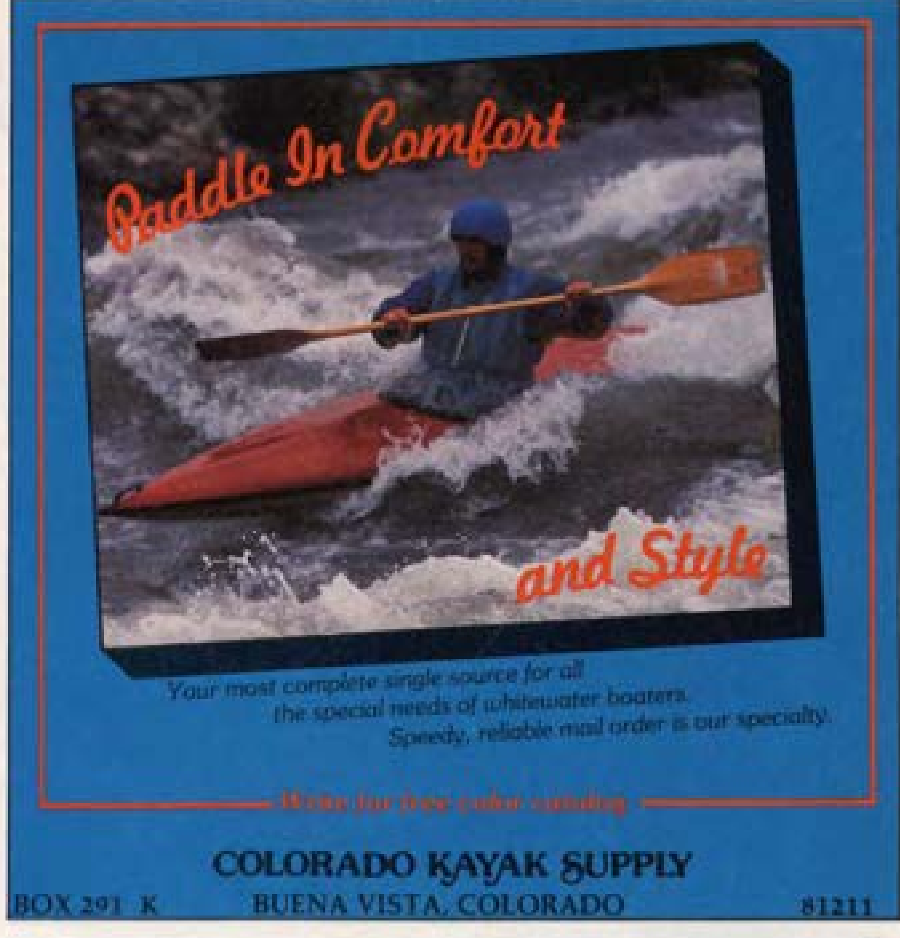
• In December 1983, in one of his last official actions, former Secretary of the Interior James Watt abruptly changed the federal government's long-standing policy governing state and Native land selections. No opportunity was provided for public comment. The Bureau of Land Management (BLM) estimates that the new policy could increase the Native entitlement to 48 million acres (from 44 million) and the state entitlement to 106 million (from 104 million).

• The BLM is now rubber-stamping its approval of Native allotment applications inside national parks and pre-ANILCA wildlife refuges, despite ANILCA's provision that applications for inholdings be carefully adjudicated. Major additional headaches will occur unless this policy is reversed.

• In a particularly insidious interpretation of ANILCA—and in defiance of congressional intent—the Department of the Interior intends to publish final regulations that will open the three pre-ANILCA portions of Katmai, Denali (formerly Mt. McKinley), and Glacier Bay to various forms of motorized access for the first time in the history of these decades-old wilderness parks.

ANILCA requires that general-management plans for the national-park units be submitted to Congress by December 1985. Plans for the wildlife refuges are due by 1987. Nonwilderness portions of the parks and refuges must have their suitability for wilderness designation evaluated (and reports must be made to the President) by those deadlines as well. The President must submit his own recommendations to Congress by December 1987.

With slightly more than 18 months remaining before the national-park deadline, both the National Park Service and the Fish & Wildlife Service are way behind schedule. Neither agency has published a single final general-management plan. The draft plan for the 3.6-million-acre Lake Clark National Park & Preserve, one of the "big six" Alaska parks, has been delayed by continuing objections from the Alaska Department of Fish & Game, which wants to overrule federal control of the park's fish and wildlife resources. The shore of Lake Clark itself, the centerpiece of the park and preserve, is threatened by real-estate developments on lands owned by the Nondalton Native Corporation. According to the Park Service, an estimated $30 million to $35 million would be needed to purchase these Native inholdings. This figure is some 50 percent more than the total administrative-budget request



for *all* Alaskan parks, as noted previously.

The first draft management plan by the FWS, for the Kenai National Wildlife Refuge, has just been issued, and environmentalists feel that the agency's preferred alternative is disastrous. It would continue the authority of the Alaska Department of Fish & Game, under which authority several species "have been or are now depressed," including brown bear, trumpeter swan, Dall sheep, and wolf. (Perhaps as many as 50 percent of the refuge's wolves were trapped this past winter.) Under the proposed plan, motorized access and excessive logging and manipulation of vegetation would continue. These activities would be allowed although Congress has not yet had the opportunity to decide which lands should be included in the wilderness system. While professional planners in the FWS are unhappy with the plan, the decisions are being made in Washington.

The only significant amendment to ANILCA proposed thus far has been S. 49, the attempt by Sen. Ted Stevens (R-Alaska) to change 12 million acres of national parkland to national-preserve status in order to allow sport hunting and fishing. (See "Hunters Take Aim at Alaska's National Parks," May/June 1983.) Bipartisan opposition, led by Sen. Paul Tsongas (D-Mass.), nullified this attempt in the Senate Energy & Natural Resources Committee last summer. Although no further action on S. 49 is expected, further amendments damaging to ANILCA could be introduced this year.

What does all this mean for Alaska? Between 1977 and 1980, a magnificent citizens' effort on behalf of Alaska's wilderness led to the passage of the nation's greatest public-lands act. Thereafter, the country's administration was turned over to adversaries of the legislation who have proceeded to misinterpret and distort the intent of the new law.

It will become more and more difficult to carry out the promise of ANILCA unless the American people once again realize that Alaska's greatest treasure is not its gold and silver, or its timber, or even its oil: It is the enduring magnificence of its land, its wilderness and the life it supports. The conservation units established by ANILCA represent a public trust belonging to everyone. We helped achieve this trust; it is now our responsibility as well as our prerogative to see that it is properly cared for. It is time, once again, to let our representatives in Washington, including our President, hear our voices.

Edgar Wayburn, the Sierra Club's Vice-President for Parks and Protected Areas, heads the Club's Alaska Task Force.

COAST to COAST

New England has come to California.

New England Log Homes, Inc. (NELHI), the nation's leading log home manufacturer, has opened its Western Regional Office in Marysville, California with its new manufacturing plant coming on line.

With its California plant, New England Log Homes can better accommodate that special love of the open spaces with faster delivery at lower costs, featuring designs to highlight your personality and the wonders of the West.

Get ease of construction, low energy costs, minimum maintenance — and your imprint on your log home — thanks to New England Log Homes' more than 40 basic models and countless design options.

Send for a free color brochure or order NELHI's detailed Planning Kit.

NEW ENGLAND LOG HOMES

Western Regional Office
Marysville, California
Outside California TOLL FREE

AUTHENTIC LOG HOMES

Manufacturing facilities in Great Barrington, Massachusetts; Lawrenceville, Virginia; Houston, Missouri and Marysville, California (1984).
© 1984 by NELHI

MASTERCARD
Please Print NAME
ADDRESS
CITY
STATE ZIP

OCEAN INCINERATION
The Public Fumes While EPA Fiddles

KEITH SCHNEIDER

With the economy severely depressed along the Mexican border and the region's citrus and vegetable crops heavily damaged by midwinter freezes, this has been a tough spring for the farmers and fishermen of the lower Rio Grande Valley in south Texas. Now, with thousands of other Gulf Coast residents, they are awaiting a decision from Washington over the burning of millions of gallons of PCB-laden hazardous waste in the Gulf of Mexico.

Rarely has an environmental issue so galvanized the Gulf Coast. Assisted by major environmental groups (including the Sierra Club, Greenpeace, the Audubon Society, and Friends of the Earth), legions of critics from Texas to Alabama have protested the Environmental Protection Agency's handling of the proposal to burn hazardous wastes at sea.

On November 21, 1983, more than 6,000 people, including Texas Governor Mark White, turned out at the Jacob Brown Civic Auditorium in Brownsville, Texas, to register their anger and disapproval at a public hearing. In an atmosphere reminiscent of a political convention, marchers filled the streets around the auditorium carrying banners and signs. "BAN THE BURN" read one sign. "Don't let Brownsville become Burnsville!" was another's cry. Farmers marched with farmworkers. Catholic Hispanics linked arms with Anglo Protestants. Democrats and Republicans stood side by side. At no time had so many diverse groups rallied against one issue in Texas. And from dawn to dusk, one by one, the protestors took their turns at the microphones to condemn the idea. It was the largest public hearing in EPA history.

The testimony focused on one issue: There is nothing attractive about burning the byproducts of America's petrochemical industry at sea. Even in the best weather conditions, and assisted by the most sophisticated anticollision equipment, transporting explosive toxic chemicals far offshore is fraught with risk. Marine scientists fear the effects on the ocean environment of smokestack emissions containing PCBs, dioxin, and other dangerous compounds. Biologists claim a spill could devastate marine life. Coastal residents are afraid of explosions or accidents in their ports. Seafood and tourist industries believe that their businesses will suffer if the Gulf is even thought to be contaminated. Finally, the need for incineration at sea is questionable to begin with. In testimony in Brownsville and before a congressional subcommittee, managers of land-based incineration companies say that because they are operating at only half-capacity, the waste-burning ships simply aren't necessary.

In addition to raising the scientific questions, Rio Grande Valley residents have uncovered disturbing evidence that the EPA's actions in preparing permits for ocean incineration are mired in questionable political alliances and big-money deals. The EPA, its critics say, suspended the customary process of proposing formalized guidelines and holding public hearings in favor of issuing "research" and "special" permits for ocean burnings. And these residents wonder why more attention isn't being focused on developing methods to diminish the waste stream, on recovering valuable resources, or on technologies that might provide more effective ways to destroy dangerous compounds.

The Brownsville hearings drew an array of toxic-waste specialists and marine scientists who attacked the EPA's estimates of the risk posed by PCBs, dioxins, and other stable organic compounds that do not break down in marine environments. In essence, the scientists argued that spills in the marine environment cannot be retrieved or contained, and thus their effects could last for years.

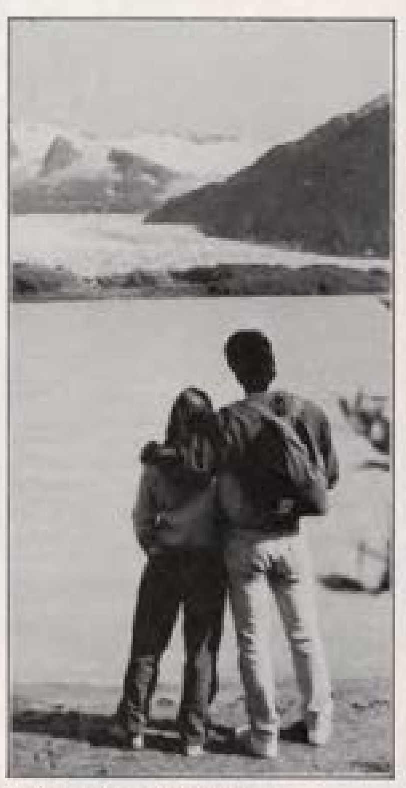
Steve Safe, a professor of toxicology at Texas A&M University, says the EPA drastically underestimated the level of chemicals, contained in stack emissions, that would be deposited on the sea surface and then sink below it. These persistent poisons tend to accumulate in the marine food chain. "The solution is not dilution," Safe said.

Dr. Michael Connor, a research fellow at the Harvard School of Public Health, has calculated that spills during the loading and unloading of incineration ships would probably be the greatest source of PCB contamination. "Yet the actual performance of [loading/unloading] systems is not documented at all," Connor noted.

Dr. David M. Owens, an assistant professor of biology at Texas A&M, said that the EPA did not consider threats to endangered species. In a letter read at the hearing, Owens wrote that five endangered turtle species live in the Gulf, including the

ALASKA
COME TO A HIGHER STATE

Adventure Cruises
Wildlife Safaris
Backcountry Expeditions
Fishing Lodges and Basecamps
Kayaking and Whitewater Rafting

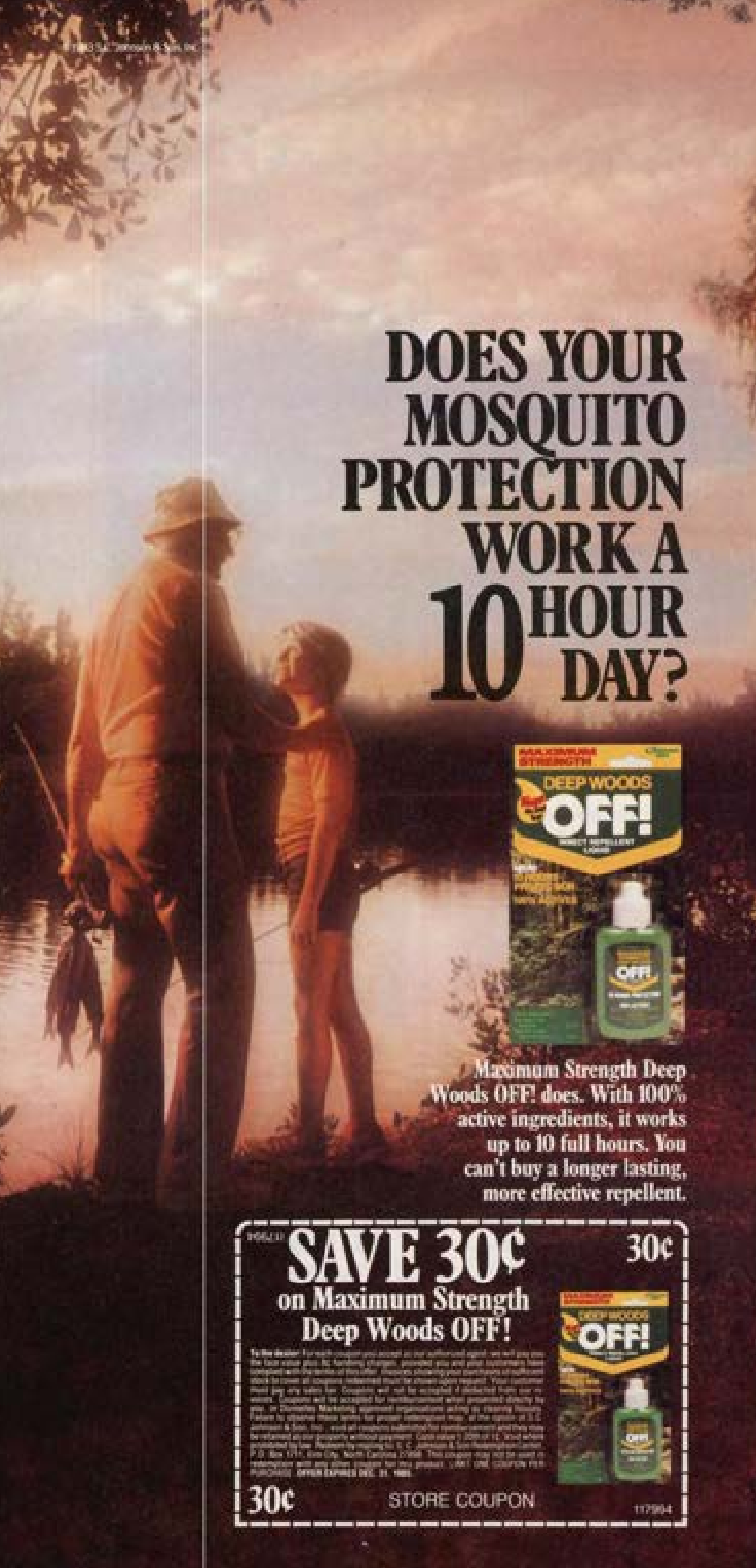


Travel with Alaska's leading Adventure Company

ALASKA TRAVEL ADVENTURES

Write for our free 1984 brochure:
200 North Franklin Street, Suite C
Juneau, Alaska 99801

Or call toll free:
800-227-8480



rare Kemp's ridley turtle, which nests only in the western Gulf. A large spill could decimate the already threatened population of Kemp's ridleys, Owens said. (See "Sea Turtles," *Sierra*, September/October 1983.)

One of the most aggressive speeches was delivered by Gov. White. He said the EPA failed to develop baseline data to ensure the validity and reliability of incineration monitoring. He asked why formalized guidelines were not developed before the EPA issued the permits, and argued that, in the absence of tests on particulate emissions from the incinerator stacks, the EPA simply assumed they would not present any hazard. White said the plan for handling a spill—allowing the waste to sink to the ocean floor—was "unacceptable and irresponsible." Voicing his fear of a catastrophic spill, White urged the EPA to rescind its permits. "No one ever believed the *Titanic* could sink . . . until it happened," the governor reminded the agency's representatives.

The depth of the protest stunned the EPA. "We were amazed—no, surprised—by the intensity of the community reaction in Texas," said Alan Rubin, manager of the EPA's ocean-incineration permit program. "It has caused us to consider the comments very carefully. It may not change the ultimate decision, but it's making us do our homework."

OCEAN INCINERATION has attracted an array of rich and powerful allies, for two primary reasons. The first is potential profit. Because the EPA will not require anti-air-pollution equipment on the ships, the cost of burning hazardous waste at sea will be less than for burning on land. And with 40 million tons of liquid waste being produced annually, along with millions of tons of liquids stored in landfills, ocean-incineration companies foresee a lucrative market for their services.

Second, while the EPA has said it will monitor all ocean burns by sending a representative along on each voyage, the agency's enforcement record in recent years has been haphazard at best. If ships are permitted to operate at sites far beyond the horizon, critics wonder, who will be around to report large spills or other accidents?

Opposition on the Gulf Coast coalesced on October 21, 1983, when the EPA published a notice in the *Federal Register* announcing that Chemical Waste Management, Inc., a disposal company based in Oak Brook, Ill., had been granted tentative approval to burn 79.7 million gallons of mixed liquid organic chemicals containing PCBs, and 264,000 gallons of the banned insecticide DDT. The burnings would be conducted aboard the company's two 307-foot-long incinerator ships—the *Vulcanus I* and

Vulcanus II—at a site 170 nautical miles east-southeast of Brownsville.

The agency said it issued the tentative permits after carefully studying the results of a series of research burns aboard the two ships that occurred between 1974 and 1982 in the North Atlantic and Pacific oceans and the Gulf of Mexico. In those tests the ships burned Agent Orange, PCBs, vinyl chloride, and other toxic compounds. The EPA scientists were satisfied that "the proposed incineration would not unreasonably degrade or endanger human health, welfare, or amenities, or the marine environment."

Not surprisingly, the agency's position is supported by officials of ChemWaste and two other companies pushing development of incinerator ships. Fifteen years of experience with ocean incineration in the North Sea, the Gulf of Mexico, and the Pacific Ocean, these officials argue, has not resulted in a single accident either in port or on the open sea. "We have disposed of more than 400,000 tons of liquid chemical wastes in three oceans without a single mishap," says Frank Krohn, ChemWaste vice-president in charge of ocean incineration.

Many who testified at the Brownsville hearing were concerned by the way in which ChemWaste secured its permits. Between 1981 and 1983, during the Anne Gorsuch Burford regime at the EPA, many key decisions were made without public scrutiny and in close cooperation with ChemWaste, which was actively pursuing federal permits to operate the *Vulcanus I* and *Vulcanus II*. The extent of this relationship was first disclosed at the height of the EPA scandals last year. From December 22, 1981, to January 2, 1982, nearly 700,000 gallons of PCB-laden waste oil were incinerated aboard the *Vulcanus I* in the Gulf under a "research" permit granted by the agency without prior public comment.

The test burn turned into a fiasco. An EPA evaluation of the project, published last year, confirmed that the incinerator-monitoring equipment became so clogged with chemical residues that no useful data were produced. Moreover, some 40,000 gallons of waste contaminated with dioxin were trucked from an Occidental Chemical Co. plant near Niagara Falls, N.Y., to Mobile, Ala., for incineration. When newspapers got hold of the story, ChemWaste officials denied that the wastes contained dioxin. But when Occidental officials confirmed that dioxin concentrations in the waste measured 20 parts per million, the disposal company defended itself by saying a provision in the research permit allowed for burning of "other organic compounds." Later it was revealed that Scott Clarkson, a ChemWaste lobbyist, had helped formulate that permit.

During a public meeting in Brownsville in May 1982, the EPA was severely criticized for its performance during the first test burn. In an attempt to do better, the agency approved another research burn aboard the *Vulcanus I* for an additional 800,000 gallons of liquid PCB wastes. This burn took place during the last two weeks of August 1982. The EPA paid a private consulting firm $300,000 to supervise the environmental monitoring and concluded that "there was no apparent environmental impact from incineration of PCBs under these operating and performance conditions."

After the second burn, ChemWaste was anxious to secure a permanent operating permit, which would have given its ships a lucrative edge in the incineration market. In the fall of 1982 the company hired James Sanderson, a Colorado attorney and former top aide to Anne Gorsuch, to help them. The *Washington Post* reported that Sanderson met in January 1983 with Gorsuch and Frederic Eidsness, the EPA's assistant administrator for water, to "persuade the agency to speed approval for proposed ocean burnings." Within days of the meeting, the newspaper said, Eidsness reversed his staff's recommendation to evaluate ocean-burning permits more thoroughly and approved a speedup in consideration of a permanent operating permit.

ChemWaste officials say that they did nothing illegal. They insist that ocean incineration presents a valuable alternative to disposing of hazardous waste in landfills, and that long-time experience with the technology mandated that the EPA act more quickly in approving the company's applications for permanent operating permits.

Rio Grande Valley residents have also become aware of other pressures the federal government is under to move ahead with ocean incineration. Two years ago, At-Sea Incineration, Inc., a firm based in Port Newark, N.J., secured a $55.8-million loan guarantee from the Federal Maritime Administration (MARAD) to build two $37-million incinerator ships in Tacoma, Wash. On February 18 of this year, At-Sea launched *Apollo One*, a 369-foot, 4,880-ton, 12-tank, double-hulled ship with two aft incinerators, the latest in anticollision gear, and comforts for a crew of 20. The ship is capable of burning 1.3 million gallons of waste in two weeks (nearly 34 million gallons a year). A sister ship, the *Apollo Two*, is scheduled for launching in the fall. MARAD Administrator Harold E. Shear made it clear last July, in a letter to EPA Administrator William D. Ruckelshaus, that permits for the ships and additional ocean-incineration sites are vital to the success of the loan guarantees. In response Ruckelshaus assured Shear the agency was moving as quickly as possible to designate new incineration sites and to write permit regulations.

Ocean-incineration companies predict that there could eventually be as many as 48 ships burning wastes off American shores. The potential dangers are not limited to the Gulf of Mexico: An Atlantic site off the coast of New Jersey is close to final designation; a study has been conducted for a site off Southern California; and there is some consideration of burning east of Florida.

As of this writing, EPA staff members

Waste Management, Inc.

The EPA has tentatively approved a plan to burn millions of gallons of waste laden with PCBs and DDT aboard the Vulcanus II, *here docked in West Germany.*

have finished their evaluation of the public comments made at the Brownsville hearing and have issued a confidential opinion now being studied by Jack Ravan, the agency's assistant administrator for water. Ravan is the man who will eventually make the decision. Which way will he go? Nobody knows. John Hinck, toxics project director for Greenpeace, has vowed to blockade *Vulcanus I* and *Vulcanus II* at their dock site in Mobile if Ravan gives his approval to the permits. Texas Attorney General Jim Mattox and his Louisiana counterpart, William J. Guste, have said they will bring suit against the EPA, challenging the agency's authority to issue final permits without providing for prior public review. A similar suit brought by 29 individuals and groups, asking whether the EPA has the authority to issue tentative permits without first promulgating standards, was dismissed without prejudice by a Federal District Court judge in Brownsville last year on the grounds that it was premature. The judge advised all the plaintiffs to wait until the EPA could come to a final decision.

If Ravan disapproves the permits, ocean-incineration companies plan to bring suit. ChemWaste says that it has spent more than $25 million on its two incinerator ships; At-Sea, for its part, has spent $74 million. Company executives say they intend to make use of their investment and aggressively pursue permits to burn at sea.

No matter what the EPA decides, the dispute is heading for federal court. But agency insiders believe Ravan will delay issuing final permits until the agency establishes formalized guidelines for ocean incineration. Politically, this is the safest approach. First, it would require another lengthy review process. Second, it saves William Ruckelshaus from having to issue a controversial decision in Texas, a state that is important to President Reagan's reelection hopes. In the Lone Star State, the ocean-incineration issue has become hot enough to cost Reagan thousands of votes.

Keith Schneider is an editor with News West, an independent news service based in Sacramento, Calif.

HOMESTAKE II
Conflict Beneath a Cross of Snow

JEFF RENNICKE

On a wall inside the U.S. Forest Service office in Eagle, Colo., is a map of the White River National Forest. A section of 126,000 acres surrounding Mount of the Holy Cross is labeled "wilderness." Using the map, it is not difficult to pick out the trail over Missouri Pass or to trace the routes of Cross and West Cross creeks as they flow together at the base of Middle Mountain. What the map does not show, however, is the conflict currently brewing at the heart of the Holy Cross Wilderness.

Underpinning the controversy is a short section of the 1980 Colorado Wilderness Bill known widely as "the Homestake clause." It reads: "Nothing in this Act shall be construed to expand, abate, impair, impede, or interfere with the construction, or maintenance, or repair of said project. . . ."

In this case, "said project" is the Homestake II water-diversion project sponsored by the cities of Colorado Springs and Au-

TERRORIST TRUCK BOMBER, DOMESTIC VERSION

rora. The conflict that has arisen is based on two facts. First, the Homestake clause directly follows (and thus refers specifically to) the section of the Colorado Wilderness Bill that created the Holy Cross Wilderness. Second, the eleven miles of tunnel and four diversion structures associated with the project would be located in the heart of that newly authorized wilderness.

The Holy Cross Wilderness, a towering massif in west-central Colorado, is no stranger to conflict. The jagged peaks that rise from a northern spur of the Sawatch Range have been chipped and chiseled out of granite blocks. The valleys below are carved of bedrock; the creeks in turn rush over falls and go still in the meadows. It is a landscape shaped by the slow hands of glaciers, the ancient conflict of rock and ice.

Although the glaciers have long since retreated, as late as 1873 a debate simmered in legend and tall tale about the existence of a "cross of snow in the sky." Many claimed the cross existed, but when William Jackson, a young photographer from the Hayden Survey Party of 1870, came looking, he could find no evidence for it. Then, on August 24, 1873, Jackson climbed nearby Notch Mountain and settled the debate with what was to become one of the most famous photographs of its time. From that windswept summit, Jackson caught on film the image of a mountain whose face was etched with a cross of snow 1,500 feet high, with arms extending 750 feet in either direction: Mount of the Holy Cross.

Since then the mountain has been reproduced on canvas by the famous landscape artist Thomas Moran, praised in poetry by Henry Wadsworth Longfellow, and woven into the campfire tales of countless wilderness travelers. Because of its obvious symbolism, in the 1920s and 1930s the mountain was embraced by the religious community as an important shrine. (Some religious groups even claimed it possessed healing powers.) In 1929, President Hoover proclaimed the site (and 1,500 acres around it) a national monument. In 1951, the decision was made to strip the area of its monument status and incorporate it into the new White River National Forest.

The history of water development in this region began quietly, with the solitary wanderings of one John Elliot during the 1940s. Elliot was a prospector, but he wasn't in search of gold. He was looking instead to lay claim to water rights in the area, with an eye toward selling them to the growing and thirsty cities. He claimed the rights to the creeks in Homestake Valley, and later sold them to the cities of Colorado Springs and Aurora. By the summer of 1952, surveying and design work had begun for the water-delivery project that came to be called

HERE'S HOW TO SOLVE THOSE WILDERNESS RESTROOM PROBLEMS!

When nature calls and the mosquitos, cold wind, rain or snow refuse to take a break, what can a woman do? It's hard to ignore the weather and mosquitos, the poison oak and unfriendly stickers, the wobbly positions and the times one got caught with one's pants down! There has to be a better way — **Sani-fem®!**

Sani-fem® provides the lightest (1 oz.) most effective sanitation available in wilderness areas. **Sani-fem®** LETS WOMEN STAND WHEN NATURE CALLS. THE MOSQUITOS, COLD WIND AND NUISANCES OF THE OLD WAY ARE GONE BECAUSE STANDING CURES THEM ALL. NO UNDRESSING! JUST UNZIP! WOMEN USERS LOVE IT!

Sani-fem® — the featherlight ounce of discreet convenience. Nothing to empty or replace. Complete with case and instructions. Environmentally sound. Only **$8.99** for a revolution in hygienic convenience! A life saver in filling station and other primitive restrooms too!

Risk free! Immediate money-back guarantee! All orders sent first class.
It's your choice — **Sani-fem®** or the old way! Beat the rush - order now!

SANI-FEM • 7415 STEWART & GRAY • DOWNEY, CA 90241 • ATTN: MS. LINDA LEE
SAVE TWO DOLLARS BY ORDERING TWO FOR $15.98! PLEASE SEND ______ **Sani-fem®**'s TO

NAME ______

ADDRESS ______

CITY, STATE, ZIP ______

The Sani-fem® Feminine Urinary Director is patented in the USA & Foreign Countries. Dealer inquiries invited.
©1982 SANI-FEM CORP

Silk Polo Shirts!

For men and women

For golf, tennis, sailing . . . and weekends. A classic summer shirt in our softest 100% pure knitted silk. Generously cut, luxuriously cool in warm weather. 3-button placket and front button pocket. Great for vacations or traveling. Knitted silk is delicate to the touch, yet superbly long lasting. Easy to care for, too: Just hand- or machine wash, like wool. Dries overnight at room temperature. Men's/Ladies' S–XL unisex sizes in Navy, Sky Blue, Maroon and dazzling Kelly Green. *Order today!*

$26.95 ea.
in quantities of 2 or more
1 for $28.50
Price guaranteed through Sept. 1, 1984

Call toll-free:
1-800-648-7455
Alaska, Hawaii or Wisconsin:
1-608-241-2225

	S	M	L	XL
Men's	34-36	38-40	42-44	46-48
Ladies'	8-10	12-14	16-18	20

Guarantee: If not fully satisfied, return in as-new condition within 30 days of our shipping date for exchange, credit or refund of item purchase price (S & H charge not refundable). Sorry, we do not accept C.O.D. packages.

Qty.	Size	1st Color Choice	2nd Color Choice	Description	Price Each	Total
				Silk "Polo Shirts" (Navy, Sky Blue, Maroon, Kelly Green)	$26.95/$28.50	
				Silk "Prospector Shirts" (not shown—Navy or Fuchsia)	$29.50	

☐ Check ☐ Visa ☐ Master Card ☐ Amer. Exp.
Card No. ______
We ship UPS whenever possible. Be sure to give your complete street address.
Exp. ______

Shipping and Handling	$3.25
5% Tax for Wis. Addresses	
Total Enclosed	

Name ______
Address ______
City ______ State ______ Zip ______

The White Pine Company 2038 Pennsylvania Ave., Dept. K06, Madison, WI 53704

Here's why Mt. Everest climbers choose Eureka! Tents designed for YOU:

Because the wind blows. Eureka's strong frame and flexible suspension shed wind. The recent American Men's & Women's Expedition to Mt. Everest reported our hybrid hoop-and-A-frame design (shown in Alpine Meadows 2-person model above; 4-person model below) withstood winds over 90 mph!

Because you need more than waterproofing to stay dry. Eureka! engineers ventilation too. Hoods protect doors and windows. And inside flaps open from the top for full ventilation control. Eureka makes your tent a dry, pleasant place in any weather.

Because they're so convenient to set up. Eureka's original self-supporting design with shock-corded frames make it easy to make camp. A pleasant relief after a long day on any trail.

Before you buy any tent, learn why experienced campers choose Eureka! See your dealer now. Or, for a 28-page catalog of 50 affordable, Eureka! Tents, send $1 to Eureka! Box 966-HK, Binghamton, NY 13902.

Eureka!

The choice of experience.

a Johnson wax associate

Homestake I. Thus, when the spring runoff of 1967 came down the mountains, it no longer flowed down French and Fancy creeks to join the Eagle River. Instead it was diverted into tunnels that took it beneath the Continental Divide and into reservoirs owned jointly by the two cities.

The pink pipes and elaborate diversion structures that make up the original Homestake project feed the two cities 24,000 acre-feet of water annually. (An acre-foot is equivalent to 325,851 gallons.) Despite some attempts at mitigation, four valley creeks were dried up. Fisheries were lost and vegetation was destroyed as soils eroded off denuded slopes, reducing habitat for deer, elk, and other wildlife in the process.

Although an easement for both projects was granted at the same time in the early 1960s, Homestake II did not figure significantly in either the public hearings or the plans made available to the public. Yet in reality the reservoirs and tunnels of Homestake I were being drawn and constructed, at taxpayer expense, to oversized specifications with an eye toward a supplementary project. Plans for a scheme that would divert a further 20,000 acre-feet of water were announced some 14 years after the completion of Homestake I. The Roman numeral II was added in May 1981, when application for the necessary permits was made to the U.S. Forest Service.

In December 1980 the area became a part of the National Wilderness Preservation System, though saddled with the controversial Homestake clause. To gain congressional support for the exemption in their favor, the cities of Aurora and Colorado Springs agreed to alter their original plan. Instead of planning to ring the base of Holy Cross Mountain with aboveground pipelines, the cities agreed to use only underground tunnels. This was widely perceived by project opponents as application of a cosmetic approach to a much deeper conflict.

At the heart of the issue is not whether the pipes should be above the ground or below it, but whether such developments should be permitted at all within the boundaries of a wilderness area. In 1980, conservationists reluctantly went along with the disclaimer clause, without which the Holy Cross Wilderness could not have been designated. But they did not disclaim the intention to continue fighting the Homestake II project.

Despite the magnitude of the project, the U.S. Forest Service intended to perform only a short environmental assessment before granting the requested permits. Pressure from the Holy Cross Wilderness Defense Fund and other conservationist groups, however, forced the USFS to commission a longer, more in-depth environmental impact statement (EIS). The draft

Send for our FREE CATALOG
of outdoor equipment—

The Early Winters catalog is a fascinating source book of unique outdoor gear.

You'll find Gore-Tex tents and rainwear, silk and polypropylene garments, socks, knives, flashlights, and much more . . . all guaranteed to increase the ease and enjoyment of your outdoor times.

Send this card or call for your free Early Winters catalog today.

or call today 206-624-5599.

UJ

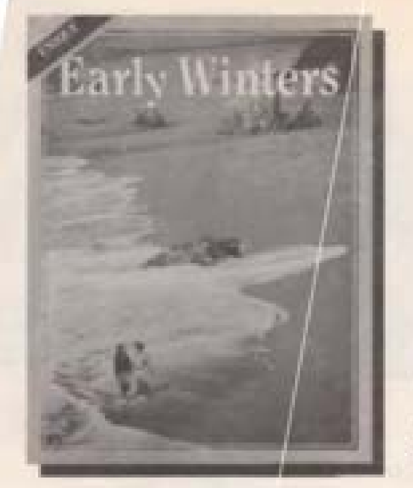
☐ Send me Early Winters' free catalog.

☐Mr. ☐Mrs. ☐Ms. ____________________

Address ____________________

City ____________________

State ____________ Zip ____________



Test our products for 30 days, your satisfaction is guaranteed.

PLACE
POSTAGE
HERE

Early Winters

110 Prefontaine Place S.
Seattle, Washington 98104

EIS was released for public comment in May 1982, and the battle was on.

Released in May and appealed in June, the document was a shambles. A public hearing, the only one held near the planned construction area, drew 400 angry residents eager to condemn the project. But the recording machines used to collect comments at such hearings failed to function properly, it was later reported, and so the arguments of project opponents were not available to the Forest Service.

A congressional review of the situation was requested by Rep. Ray Kogovsek (D-Colo.), a member of the House Subcommittee on Public Lands. That review was held November 12, 1982, when the subcommittee convened in Vail, Colo. The result—after overwhelming opposition to the DEIS had been expressed and expert testimony as to its deficiencies presented—was a letter to Craig Rupp, then the Forest Service's Rocky Mountains regional forester, and Reps. John Seiberling (D-Ohio) and Kogovsek. The letter characterized the DEIS for the Homestake II project as "inadequate to satisfy the requirements of the National Environmental Policy Act." In short, it was a shambles.

The problems with the document are many. Homestake II would be a complicated project imposed upon a complex eco-

The wetlands at Cross Creek are among the many that could disappear if the Army Corps of Engineers decides to sacrifice still more of Colorado's wilderness for water development.

NO MATTER WHAT YOU'RE DOING

WE BUILD THE BEST BOATS TO DO IT IN.

Whether you're riding the rapids or just fishing around, Achilles has an inflatable boat that's ideal for you. Tough, versatile and portable, Achilles boats add an extra dimension to any outdoor experience.

Achilles inflatable boats are ideal for camping, backpacking or fishing trips because they're lightweight and portable and fit easily into a camper, trailer or car trunk. Their fabric is the toughest, most durable made and backed up by a five-year warranty.

Achilles rafts have withstood the test of rivers around the world. They combine Achilles' unsurpassed inflatable boat technology with the expertise of professional river runners everywhere.

Call or write for our catalogs. We'll show you how to make your next outdoor experience an even more exciting one.

Achilles

DESIGNED TO BE BETTER

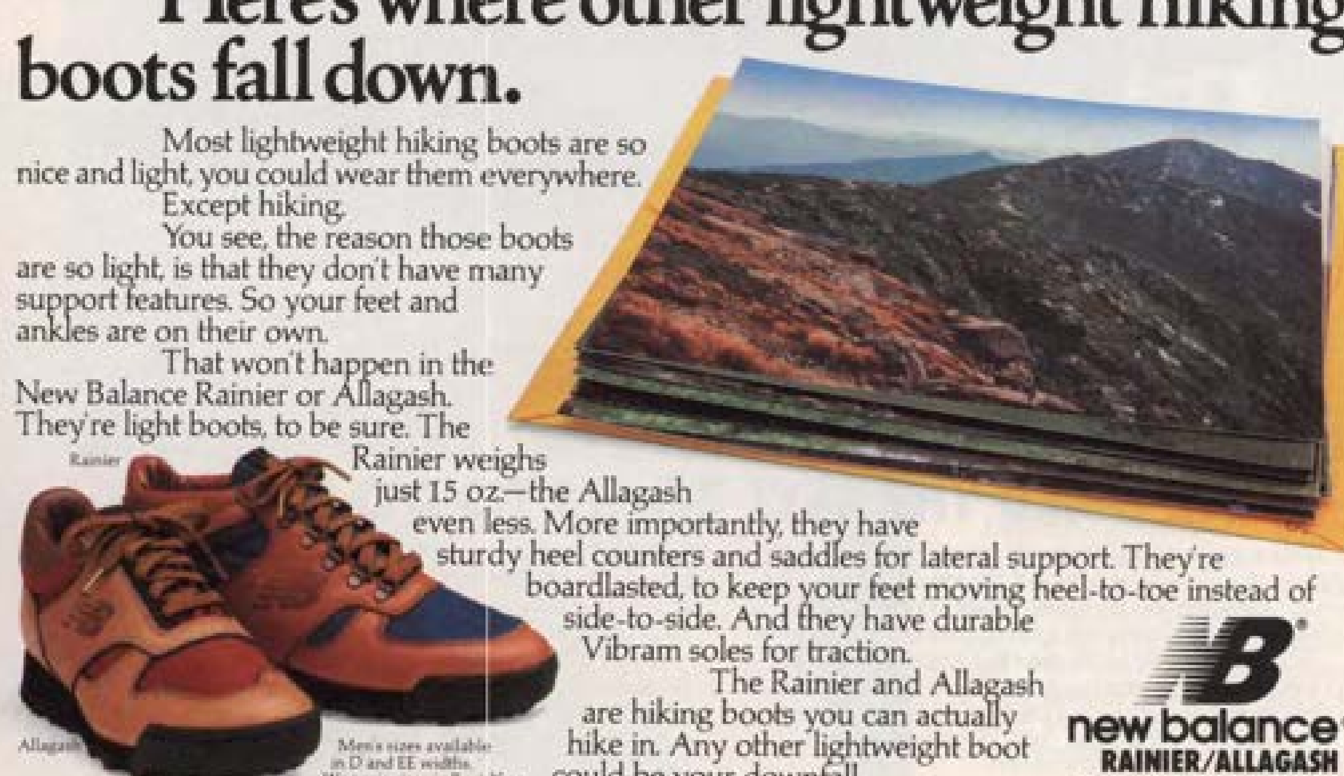
Achilles Inflatable Craft, 390 Murray Hill Parkway, East Rutherford, NJ 07073 Phone 201/438-6400

An existing water-diversion project within Colorado's Homestake Valley has already destroyed fisheries, wildlife habitat, and natural vegetation there.

system. One of the project opponents' major concerns is the fate of the high alpine meadows, the wetlands. Towering peaks and the famous cross of snow notwithstanding, these meadows are the real jewels of the Holy Cross Wilderness, and the creeks that feed them are its lifeblood. The Hayden Survey Party of 1870 called these meadows part of the "greatest example of glaciated valleys outside the Alps."

According to the DEIS, only six acres of these meadows will be destroyed by the water project. Pointing to this finding, the cities have argued that the project will take up very little space in the expansive wilderness. Yet a team of scientific researchers working as consultants to the Holy Cross Wilderness Defense Fund has come up with figures that directly contradict the DEIS. These experts charge, first, that the DEIS relied on data collected over an insufficient period of time and, second, that the data that were collected were gathered in unrepresentative portions of the wetland area. Their own calculations show that the disturbed wetland area will cover at least 240 acres, 40 times the total predicted by the DEIS.

Indirect impacts are more difficult to quantify, and in an environment as complex as that of a high-altitude wilderness, effects can ripple like waves on water. Just below the diversion point, streamflows may be



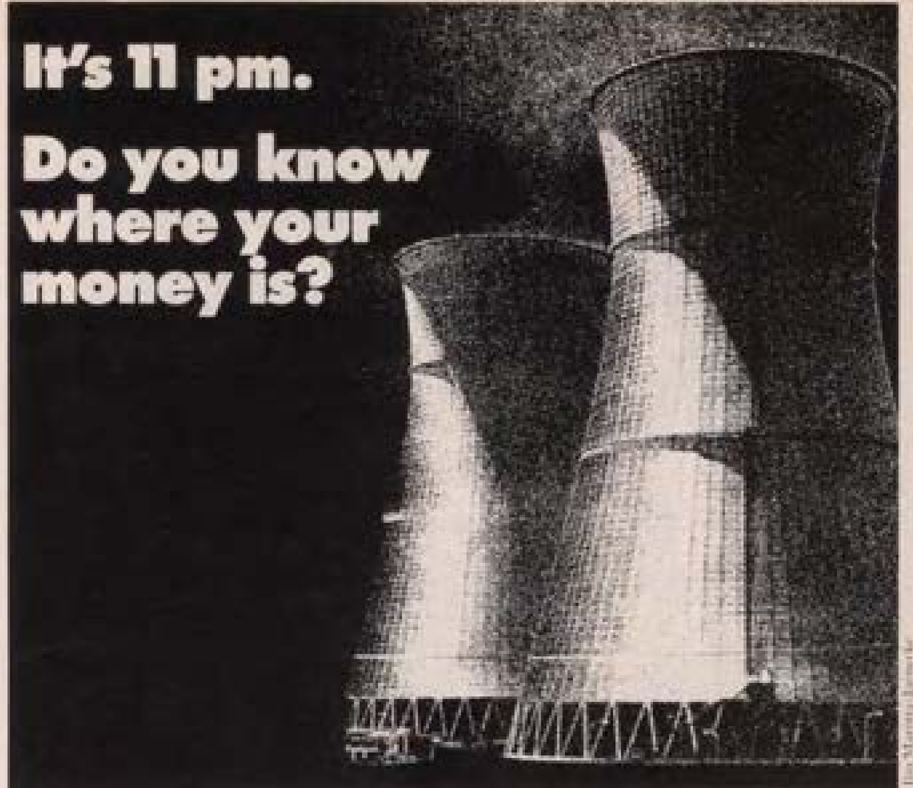
reduced by as much as 95 percent. The effect of this drastic change would be felt not only by the wetlands but by their inhabitants.

To say that fish need water is an obvious statement; yet even while admitting the likelihood of low flows, the DEIS denies that fisheries will be affected. Early in the study period, in fact, Forest Service researchers claimed there were no populations of Colorado cutthroat trout in the streams. This came as quite a shock to fishermen who have been catching Colorado cutthroats there for 30 years. (A subsequent study by the Colorado Division of Wildlife determined that there were indeed Colorado River cutthroat trout in these streams.)

These fish are more than just sport to fishermen—they are "indicator species" for an undisturbed and pristine aquatic environment. The Homestake II project would increase sedimentation in this pristine water environment, quite possibly killing off the native fish species. Other endangered species could be affected too: humpback chub, Colorado River squawfish, and peregrine falcon. And other dangers to the area—200 workers on site for up to five years, earthmoving operations, dynamite blasting, the potential helicopter traffic—could all disturb wildlife, block natural wildlife movement patterns, require trailheads and trails to be relocated (disturbing recreational use of the area), and so on. All this to collect 20,000 acre-feet of water that might possibly be made available by other methods requiring less wilderness disturbance.

Despite these and other arguments, on May 17, 1983, the Forest Service released Regional Forester Rupp's decision in favor of the proposed Homestake II project. Although appeals were filed by two conservation organizations and 18 individuals, environmentalists were not unduly surprised on December 30 when USFS Chief Forester R. Max Peterson announced his "qualified approval" of Rupp's decision to grant Homestake II its desired right-of-way. The qualification in this instance was Peterson's direction that the regional forester "consider the need for additional mitigating measures" in connection with the project. Although these measures would address the problem of damage to wetlands, they might do so by requiring the construction of small dams at each wetland site to maintain existing water levels. Still, says Roz McClellan, executive director of the Holy Cross Wilderness Defense Fund, conservationists can claim at least a partial victory from Peterson's ruling: "We're disappointed that our appeal was denied, of course, but we're encouraged that the chief forester recognized our basic concerns about damage to the wetlands."

Those concerns were further recognized



IF YOU'VE LEFT YOUR money in an ordinary bank or money market fund, chances are that some of it's working night and day to help build nuclear power plants. It could also be financing missiles and warheads, unproductive corporate mergers or apartheid in South Africa. Because bankers invest your savings where *they*—not *you*—see fit.

A practical alternative

Now there's a safe, practical way to put your idle cash to work for things *you* believe in. Like renewable energy, equal opportunity and peaceful, non-polluting enterprises that create jobs in America instead of shifting them abroad.

Working Assets is a money market fund for people who want to put their savings to good use. Happily, you can join this nationwide pool of concerned savers *without sacrificing safety, yield, or check-writing convenience.*

Why delay?

At Working Assets, your cash earns high current interest while it's put to good use. And there's no penalty for withdrawing at any time.

If this sounds like a good reason to transfer some of *your* assets to Working Assets, why wait another night? Return the coupon or call us toll-free right now at 800-543-8800 and we'll send you our enlightening prospectus.

You have nothing to lose. And what you'll gain is worth more than money.

WORKING ASSETS

800-543-8800
Toll-free night or day

WORKING ASSETS MONEY FUND
230 California Street, San Francisco, CA 94111

☐ **Yes!** Please send me your prospectus including more complete information about management fees and expenses. I'll read it carefully before investing.

NAME
ADDRESS
CITY STATE ZIP

We put your money to good use.

The enjoyable sport of cross country-skiing is cited by leading physiologists as the most perfect form of aerobic exercise. Its rhythmic total body motion uniformly exercises more muscles than other forms of exercise and its smoothness causes no joint pain or damage. NordicTrack lets you get the same top fitness building benefits year round in the convenience of your home. NordicTrack eliminates barriers of time, weather, chance of injury, etc. Very effective for weight control.

More Complete Than Running
Adds arm and shoulder exercise. Jarless — doesn't injure the joints.

More Effective Than Exercise Bikes
More complete. Adds important upper body exercise and provides more uniform leg muscle usage. Higher pulse rates, necessary for building fitness, seem easier because more muscles share the exercise.

Even Better Than Swimming
When swimming, the water supports the body allowing major leg muscles to loaf. The stand up position on the NordicTrack exercises the leg muscles much more uniformly.

Features
Simple motorless mechanism. Independently adjustable arm and leg resistances. Speedometer, odometer included. Pulsemeter optional. Red oak frame for quiet operation and fine furniture appearance. Pelvic pad provides user stability.

Exclusive Patented Flywheel Action
Provides unmatched smoothness and continuity from stride to stride. Motion and resistances are same as in real skiing.

- Fits in your home or office
- Folds and stands on end to require only 15" x 17" storage area

Two year warranty, 30 day trial period. Call or Write for Free Brochure.

TOLL FREE —
1-800-328-5888
Minnesota 612-448-6987

PSI 124-S Columbia Court, Chaska, MN 55318

in a report prepared this spring for the Army Corps of Engineers, which must issue a permit for Homestake II before construction can begin. Released on March 9, the report—acknowledging the potential for significant adverse impacts on the wetlands—recommends at least another year of data collection to determine the full effects of Homestake II. The report also suggests, however, that the project could be approved if the mitigation measures suggested by the Forest Service—dams at the mouth of each wetland—were put into place.

Although the Army Corps' decision is due in May, the Holy Cross Wilderness Defense Fund is asking that it wait until after additional data are collected. Roz McClellan says it would be shortsighted to approve the project before there are enough data to know whether the impacts can be mitigated at all. The fund also objects to the massive amount of construction the proposed mitigation measure would entail. Building numerous artificial dams would sorely compromise the solitude, wildlife, and other wilderness qualities of the area.

Designation of the Holy Cross Wilderness was a great achievement. The current task is to see that it is not lost in a cloud of dust from a dried-up creek.

Jeff Rennicke is the former executive director of the Holy Cross Wilderness Defense Fund. He has been published in Canoe *and* Wild America.

COUNTERCWIP
Who'll Pay for New Power Plants?

BROOKS YEAGER

Although almost 100 planned or partially constructed power plants have been cancelled in the last decade, the Reagan administration continues to envision a rosy electric future. By the year 2000, the Department of Energy has reported in "The Future of Electric Power in America," we will need 300 to 400 new central-station power plants to meet our electrical needs.

How much of the risk of implementing such a grandiose plan should be borne by the ratepayer instead of the shareholder? State-utility regulators have been grappling with that controversial question for years, and the debate has now moved to Washington, D.C., where the Senate is considering what has been characterized as the most impor-

tant piece of consumer energy legislation to be brought before the 98th Congress.

Sponsored in the House of Representatives by Richard Ottinger (D-N.Y.) and Tom Harkin (D-Iowa), and passed by the House in February, the Construction Work in Progress Policy Act would limit the degree to which an electric utility may pass on to ratepayers the costs it incurs as it builds a new facility. If approved by the Senate, the legislation would effectively reverse a recent administration ruling that allows utilities under the jurisdiction of the Federal Energy Regulatory Commission (FERC) routinely to include the cost of constructing power plants in their rate bases, even before the plants are on-line, producing power.

Traditionally, utilities have been allowed to charge consumers only for facilities that were "used or useful"—that is, those actually generating electricity. Several years ago some utility commissions, including FERC, adopted a policy that permits adjustments to be made to a utility's rate base not only to compensate the utility for construction costs incurred while new facilities are still being built, but also to provide the utility with a cash return over and above such compensation. Under this policy, construction work in progress (CWIP) may be included in a utility's rate base if the utility can show that it will face "severe financial difficulty" without such assistance.

Under the Reagan administration's philosophy of utility deregulation, however, FERC last year abandoned its "financial distress" policy. In a reversal of its traditional stand, FERC ruled to allow a utility, regardless of its financial condition, to automatically include 50 percent of its CWIP costs in the rate base for its wholesale customers. The rule immediately affected consumers whose local public or private power systems buy electricity from an investor-owned utility that is currently building new facilities. It could theoretically raise electricity prices for as much as 12 percent of the nation's total electric output—the portion currently under FERC jurisdiction.

Like the House bill, Sen. John Chafee's S.1069 would return to the original philosophy of allowing CWIP to be included in a utility's rate base only in extraordinary circumstances. The legislation formulates a series of planning requirements forcing utilities, for the first time, to examine options other than new construction for meeting new demand. Such options include cogeneration, load management, and conservation, and embody a planning process that environmentalists have long advocated as a way to deal with future growth in utility loads.

Proponents of the legislation, ranging from the Sierra Club to the American Asso-

Mansfield® has the camping sanitation products you need. From our 100% safe Waste Be Gone (available in powder or liquid) to our Sani-Soft Toilet Tissue, there are simply no safer products....for you....or for the environment.

Our Adventurer® portable toilet is just one of a full line of self-containeds. All easy-to-use, lightweight and compact. With all the convenience of home.

For complete information on our entire line of Mansfield Camping Sanitation products, see your local supplier or call us toll-free. **(800) 321-9886**

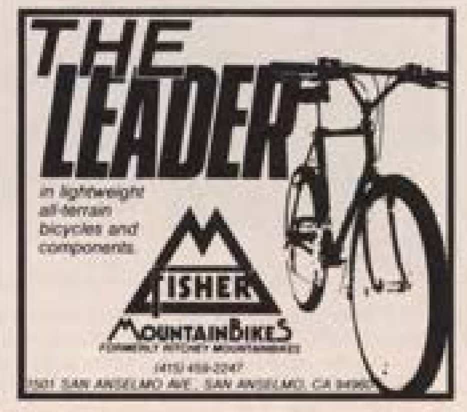
Before you camp anywhere, come to Mansfield.®

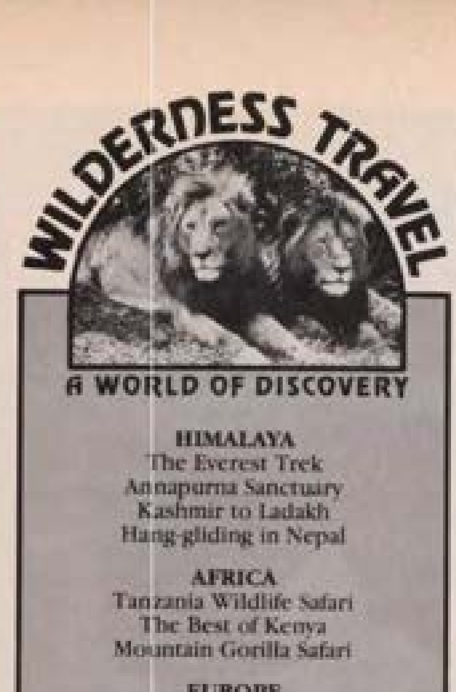
Mansfield Plumbing Products

A Division of Clevepak Corporation

201 Wayne St. • Big Prairie, Ohio 44611 • 216-496-3211

Toll-Free (800) 321-9886





A WORLD OF DISCOVERY

HIMALAYA
The Everest Trek
Annapurna Sanctuary
Kashmir to Ladakh
Hang-gliding in Nepal

AFRICA
Tanzania Wildlife Safari
The Best of Kenya
Mountain Gorilla Safari

EUROPE
Medieval Hill Towns of Italy
Footloose in Greece
Bicycling the Loire Valley

EGYPT
Land of the Pharoahs
Egypt and Israel

ANDES
Realm of the Incas
Trekking the Cordillera Blanca
Patagonia

AMAZON
Tambopata River Expedition
Peru's Manu National Park
Headwaters of the Amazon

GALAPAGOS
One and two-week cruises
Special Hiking Expedition
Private charters for groups & families

Write for free 40 page color catalog
describing over 50 trips worldwide

Very Small Groups
Expert Leaders

Name
Address
Zip

WILDERNESS TRAVEL
1760-S Solano Avenue, Berkeley, California 94707
(415) 524-5111

ciation of Retired Persons, object to the routine inclusion of CWIP for a variety of reasons. It transfers the risk of power-plant construction from a utility's shareholders to its captive ratepayers. It forces customers to pay for facilities from which many will not benefit, either because the plants may never be completed or, in the case of the elderly, because the ratepayers will not live to see the completed facility. Most significantly, CWIP encourages utilities to build expensive power plants that require long lead times without requiring them to examine other alternatives. Because of the financial cushion CWIP provides, utilities tend to disregard danger signals from the marketplace and proceed with possibly unneeded facilities.

One of the bill's advocates in the House was James Weaver (D-Ore.), who, during floor debate, drew a connection between the pitfalls of CWIP and the lack of caution that led to the Washington Public Power Supply System (WPPSS) fiasco. "In the Northwest our rates have doubled, doubled again, and doubled again, simply because of people like the Secretary of Energy, Mr. Don Hodel, when he was Bonneville Power's administrator," Weaver said. "He was the one who pushed the blank check to build WPPSS. The utility industry did not care how much these plants cost or whether they were needed or not, because they could simply pass the costs on to their consumers. . . . The utilities went right on and built WPPSS, and now not one kilowatt hour has been produced . . . and we have a 2,000-megawatt surplus in the Northwest."

Not surprisingly, Secretary Hodel is a current champion of CWIP. In a letter to every member of the House Energy & Commerce Committee, Hodel warned of the dangers of rate shock (when facilities finally do go into service) and of further dependence on oil and gas: "We cannot afford legislation that . . . casts a shadow over the adequacy and efficiency of our nation's electricity supplies."

The scare stories about electricity shortages and dependence on foreign oil that have been brought up to foment opposition against the CWIP policy bill are indeed reminiscent of the way in which the Bonneville Power Administration ensnared so many Northwest utilities into WPPSS in the early 1970s. The results of such a strategy are both clear and unfortunate: regional bankruptcy, and an electricity surplus going begging for customers.

The real scare story is the financial consequence of overbuilding by utilities—a WPPSS on a national scale. CWIP can be justified on a case-by-case basis, but as a routine strategy for future power-plant financing it is a prescription for disaster. □

Brooks Yeager is a lobbyist on energy issues in the Sierra Club's Washington, D.C., office. He also works on federal coal-leasing policies.

SIGHTINGS

At a February dinner attended by East Coast supporters of the Sierra Club Committee on Political Education (SCCOPE), Sen. Robert T. Stafford (left) recalled how the Club's support was crucial to his reelection campaign in 1982. The Vermont Republican is seen here in friendly conversation with a pair of Club leaders, Vice-President Edgar Wayburn (center) and Director David Brower.

MUSKOL INSECT REPELLENT

ITS REPUTATION PUTS IT IN A CLASS BY ITSELF.

You reach for top-of-the-line sporting equipment because you know it's going to give you the edge. And help you do your best, even under the worst conditions.

This is the same reason so many hunters, fishermen, professional guides and outdoorsmen throughout the world count on Muskol Insect Repellent.

The famous Muskol reputation began 25 years ago when Charlie Coll, a legendary Canadian sportsman, created Muskol as the "ultimate protection". Over the years nothing has topped its effectiveness against mosquitoes, fleas, ticks, gnats, chiggers and biting flies. From the Canadian wilderness, to the South American jungles and swamps, to the plains of Africa.

Just one application of Charlie Coll's Original 100% DEET lotion formula will keep bugs from biting wherever you go...for up to 10 hours.

Muskol Insect Repellent.

It's been in a class by itself for nearly a quarter century. This season, let it give you the edge against bugs. In Maximum Strength 10-hour lotion, and convenient Regular Strength Aerosol Spray.

ORIGINAL CANADIAN FORMULA NOW AVAILABLE WHEREVER YOU BUY SPORTING GOODS.

© 1984, Plough, Inc.

SECURING THE

Now used by thousands to protect the nation's wild places, the Wilderness Act was once the dream of a very few.

DOUGLAS W. SCOTT

California's austere Lake Aloha is part of Desolation Wilderness, which was designated in 1969.

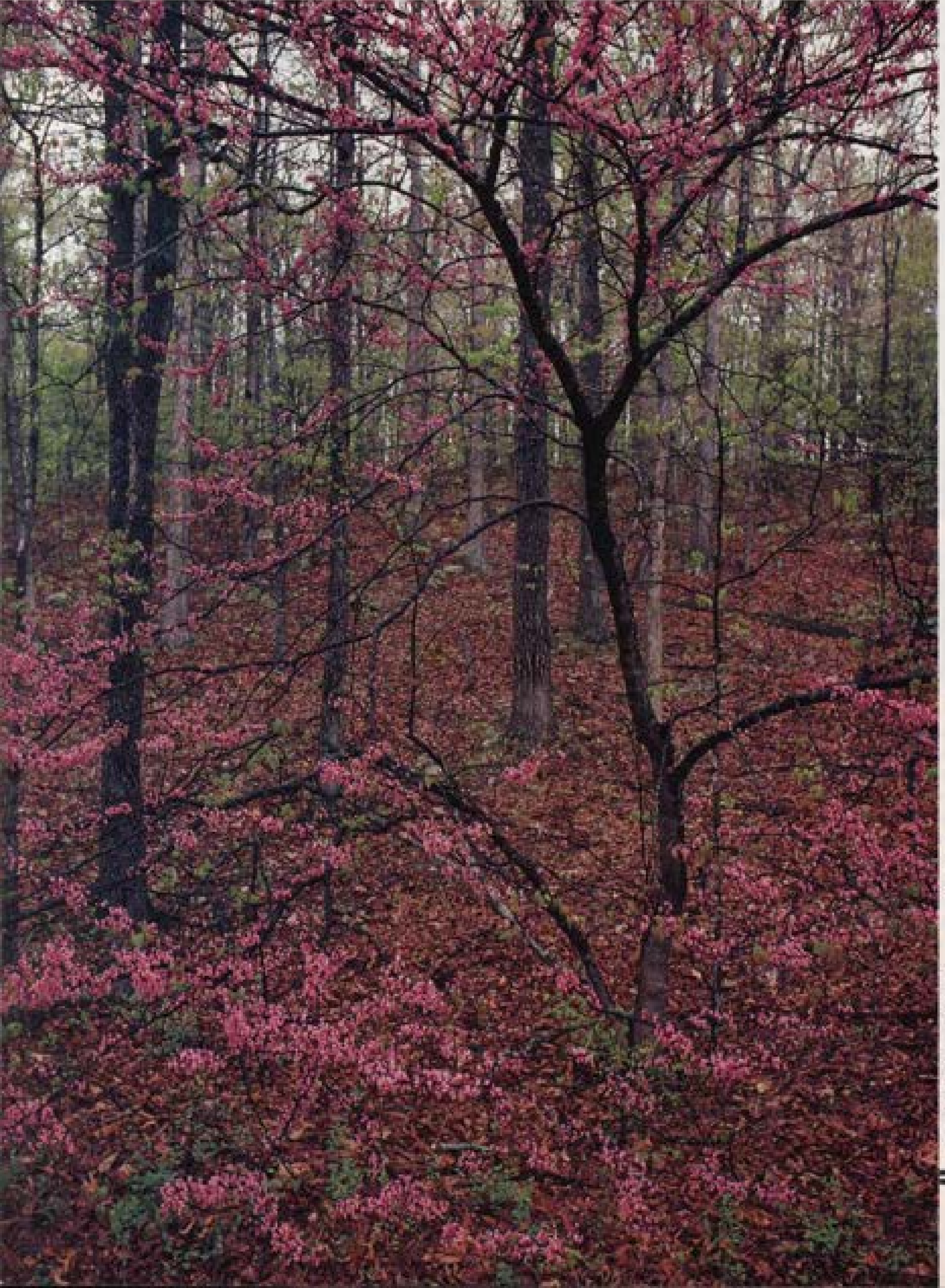
THIS YEAR THE WILDERNESS ACT is 20 years old. Old enough that most who work to preserve wilderness today were not participants in the epochal struggle to enact this basic law, and old enough that few recognize how fundamentally the act changed—and improved—the outlook for preserving wilderness.

The Wilderness Act is a people's law—a tool that thousands have used over the past two decades to preserve their favorite wilderness areas. More than 70 million acres in 216 areas have been designated as wilderness in the 20 years since the legislation was signed on September 3, 1964.

The law itself is the culmination of an absorbing intellectual odyssey and of an extraordinary, protracted legislative battle that dominated conservation politics in the 1950s and early 1960s.

The Wilderness Bill was introduced in Congress in 1956. That January the Sierra Club could claim just 9,972 members and 11 chapters. It had no lobbyist stationed in the nation's capital. The Wilderness Society, with 7,000 members, maintained a two-person headquarters in Washington, D.C. These and other key wilderness organizations —the National Parks Association, the Izaak Walton League, the National Audubon Society, and the National Wildlife Federation—devoted their efforts to staving off the increasing attacks on those few areas where wil-

WILDERNESS



Wilderness activists have worked for protection of the Irish Wilderness in Missouri for the last few decades. Designation is expected in the spring, when redbuds are in bloom.

Currently pending in Congress, the Pemigewasset Wilderness in New Hampshire will become the largest forest wilderness in the East.

derness enjoyed a semblance of protection.

In the national forests there were regulations giving recognition and a measure of protection to some 14 million acres of wilderness. The authority to preserve these units—or to delete them—was left in the hands of the Chief of the U.S. Forest Service or the Secretary of Agriculture. In January 1956, John Barnard noted in the *Sierra Club Bulletin* that "many people will be surprised that protection of America's wilderness rests on so slim a base as these regulations. . . . Theoretically, America's wilderness areas could be wiped out by the stroke of the Secretary's pen even though public sentiment did not favor it."

In the national parks there was the "back-country"—whatever wildland remained beyond the expanding edges of park development. The Sierra Club's then-Executive Director, David Brower, explained in a 1956 letter to a former director of the National Park Service, "The concept [of the Wilderness Bill] has great promise for the days coming soon, when the zoning we have always understood to exist in the parks will need this careful spelling out to counteract pressures [on the parks] such as we hardly used to dream of."

In national wildlife refuges, roadless areas had no special protection at all. In fact, the very permanence of the refuges themselves was not certain.

None of this "preserved" wilderness had any great prospect of surviving. Indeed, the threats to these relatively few acres—and to the tens of millions of *de facto* wilderness acres neither mapped nor protected—accelerated by quantum leaps in the boom years of post-World War II prosperity.

This was not at all what conservation leaders had envisioned. In the 1930s the national treasure trove of specifically identified wilderness areas had grown steadily. Most of this preservation effort occurred in the national forests—and much of it without any great citizen effort. The impetus came from within the Forest Service, led by one extraordinary man, Robert Marshall. As head of the Forest Service Division of Lands, Bob Marshall pressed for wilderness preservation with single-minded devotion.

Bob Marshall was, in the phrase of Robert Sterling Yard, "the most efficient weapon of preservation in existence." His sudden death, at the age of 38 in November 1939, sent a shock wave through the small group of wilderness-preservation leaders who had relied almost completely upon his seemingly boundless energy.

Less than a year later, Harvey Broome, one of the founders of The Wilderness Society, wrote to the great wilderness naturalist Olaus Murie, voicing his apprehensions about the future of wilderness: "After Bob Marshall died, I came to realize . . . how much I relied upon his immense knowledge. Since his death I have been wondering just how permanent and legally inviolable are the various wilderness areas in this country. . . . Do you think," he asked, "wildernesses would have more permanence if there were some new status, established by Congressional enactment?"

Thus, in August 1940, the fundamental question was asked. It was a turning point in the struggle to preserve wilderness.

Through the countless piecemeal wilderness-defense fights in the 1940s and early 1950s, the question was asked more and more frequently, by more and more conservationists: Should we seek a law to preserve wilderness? In fighting each local battle their suspicions were confirmed. Existing means of preserving wilderness were temporary at best, and those who sought its preservation were inevitably put on the defensive. The

long-term outlook for wilderness under such circumstances was hopeless:

- There was no national policy for the preservation of wilderness. It was not even recognized as an intrinsically valuable resource rather than just a storehouse of soon-to-be-developed commercial potential.
- There was no well-accepted definition or standard for wilderness—no precise meaning for the word in land management.
- There was no national system for wilderness preservation. Four or five agencies made varying efforts according to widely differing standards—or none at all.
- There was no process for wilderness designation, and no way for citizens to initiate consideration of an area.
- There was, in fact, no assurance that wilderness was being preserved in perpetuity. Conflicting pressures were increasing, and nowhere was it written that wilderness should be preserved forever.

Conservation leaders drew the only possible conclusion: If wilderness were to remain wild forever, it would require the greater permanence of statutory law. Howard Zahniser, executive director of The Wilderness Society, led the way, carefully working to draw together a consensus among conservation groups that a law was needed. (See "The Visionary Role of Howard Zahniser," page 40.) In February 1950 the Sierra Club Board of Directors unanimously voted to seek such legislation.

Zahniser was ready to launch the Wilderness Bill campaign in 1951, when he first publicly spelled out the elements of the proposed bill at the Sierra Club's Second Biennial Wilderness Conference. However, the conservation movement had to turn that year to an all-consuming struggle to stop Eisenhower administration plans to construct a massive water-storage dam at Echo Park within Dinosaur National Monument. Zahniser and Dave Brower, who led the Echo Park fight, consciously used it to further the campaign for the Wilderness Bill.

The Echo Park fight was won in late 1955, through the largest lobbying campaign yet mounted by the increasingly effective conservation groups. Zahniser set to work drafting the Wilderness Bill the following February. It was formally introduced in the Senate that June by Sen. Hubert Humphrey (D-Minn.) and others, and in the House a few weeks later by Rep. John Saylor, a Pennsylvania Republican whose staunch advocacy of wilderness proved crucial.

It took eight years to pass the Wilderness Bill. In the end it had been revised and, in some respects, weakened. But in 1964 it was enacted as the charter for the National Wilderness Preservation System (NWPS). Though he did not live to see it signed, Zahniser knew the law would provide a new generation of wilderness advocates with the fundamental national policy needed to ensure the preservation of wilderness.

While the Wilderness Act immediately preserved 9 million acres of already established national-forest wilderness areas, it provided no guaranteed mechanism to add acreage to this minimal system.

September 3, 1964: President Lyndon B. Johnson presents Mrs. Howard Zahniser (right) and Mrs. Olaus Murie with the pens he used to sign the Wilderness Act into law.

The drafters of the act had sought to make the addition of new areas as automatic as possible. The President would announce proposals for new wilderness areas, and they would be added to the NWPS unless Congress were to pass a resolution vetoing the proposal. The power to initiate proposals would lie with the executive branch.

This was not the way the Wilderness Act turned out. Desiring greater congressional control over the decisions on new wilderness areas, opponents of wilderness insisted that lands be added to the system only by individual acts of Congress.

Ultimately, conservationists had no choice but to acquiesce. At the time they viewed this as a major disappointment; but as things developed, this "defeat" could be turned to enormous advantage. If Congress were required to pass a specific law to designate each new wilderness unit, it could in the process alter and expand the boundaries proposed by the agencies. Conservationists could, in effect, appeal to Congress to override agency wilderness proposals that were too small or that adopted unsatisfactory boundary configurations.

Thus, the fundamental strategy for wilderness preservation became, by the late 1960s, one of congressional lobbying to improve upon agency proposals. The handful of professional wilderness lobbyists knew they could not cope with this huge task themselves. A new generation of leaders deliberately set out to decentralize the wilderness movement, to teach the arts of grassroots organizing and legislative politics to volunteer activists everywhere. Stewart Brandborg, who became executive director of The Wilderness Society when Zahniser died in May 1964, pointed out that "the Wilderness Act, as it was passed, has opened the way to a far more effective conservation movement, in which people in local areas must be involved in a series of drives for preservation of the wilderness *they know*."

Led by Brandborg, and by Mike McCloskey (at that time the Sierra Club's Conservation Director) and Club volunteer leaders, the campaign got rolling in the late 1960s. Organizers were dispatched to go from town to town, urging people to participate in forthcoming wilderness hearings. Sierra Club members organized study trips into areas being considered by the agencies and produced detailed citizens' wilderness

The Visionary Role of Howard Zahniser

THE WILDERNESS ACT—and the legislative struggle to enact it—involved the efforts and inspiration of countless people. A complete list would be impossible to draw up, but all involved would acknowledge the indispensible, visionary role of Howard Zahniser.

Zahniser was the true architect of the Wilderness Act, not merely because he drafted its language and catalyzed the endless details of the legislative campaign to see it enacted, but because he motivated so many to see the need, inspired thousands to think it possible, and emboldened all to persevere, even when discouragement set in. He was happiest, this remarkable leader, when his leadership was least visible, when a dozen others rose to voice the support he had engendered, speaking for wilderness from their own hearts.

"What made the difference," his closest ally, Dave Brower, wrote, "was one man's conscience, his tireless search for a way to put a national wilderness policy into law, his talking and writing and persuading, his living so that this Act might be born."

Zahniser, Brower, and their colleagues began from a fundamental premise: Wilderness is not merely for recreation and a "good time," but also for personal renewal as an essential need of all individuals and our entire culture.

"Out of the wilderness, we realize," Zahniser told the Sierra Club's 1951 Wilderness Conference, "has come the substance of our culture, and with a living wilderness—it is our faith—we shall have also a vibrant culture, an enduring civilization of healthful citizens who renew themselves when they are in contact with the earth."

"Zahnie," as his friends called him, was a Pennsylvanian, educated at Greenville College in Illinois. In 1931 he joined the U.S. Biological Survey as an editor, later moving on to become head of the Information Division of the Bureau of Plant Industry. In 1945 he became executive secretary and editor of The Wilderness Society (of which he'd been a charter member in 1935). He began immediately to pursue a program to build support for wilderness—and to build the case for a wilderness law. As a result of his work, in 1948 the Legislative Reference Service of the Library of Congress issued a definitive study on the status of wilderness preservation, making a clear case that strengthened protection was essential. Zahniser saw to it that this report was widely distributed.

Zahniser first publicly outlined the idea of a wilderness law in 1951, at the Sierra Club's Wilderness Conference. How much wilderness can we afford to lose? he asked. No more, was his answer: "Our only hope to avert this loss is in our deliberate effort to preserve the wilderness we have.

"It behooves us then to do two things," Zahniser went on. "First we must see that an adequate system of wilderness areas is designated for preservation, and then we must allow nothing to alter the wilderness character of the preserves. We have made an excellent start on such a program. Our obligation now—to those who have been our pioneers and to those of the future, as well as to our own generation—is to see that this program is not undone but perfected."

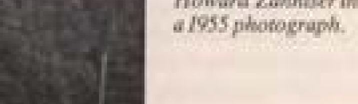
"At present," he observed, "there are so many test cases on our hands . . . that conservationists have not had the time or energy to pursue the all-important positive program that alone can prevent the constant recurrence of these controversies. Let's try to be done with a wilderness preservation program made up of a sequence of overlapping emergencies, threats, and defense campaigns! Let's make a concerted effort for a positive program that will establish an enduring system of areas where we can be at peace and not forever feel that the wilderness is a battleground."

Zahniser repeated the idea of the Wilderness Bill at the 1955 Sierra Club Wilderness Conference. In her summary, Club leader Charlotte Mauk wrote: "It was obvious that the individuals present were ready to say 'O.K.—we understand one another now and we have a pretty good idea of what we want. Let's go after it!'"

The fight to enact the Wilderness Bill was long and trying. Opponents used every legislative delaying tactic in the book. Zahniser was, in Dave Brower's tribute, "the constant advocate." Olaus Murie summed him up: "Eager to find an opportunity, taking advantage of every opening, always with good judgment in crises, and an unusual tenacity in lost causes."

After seven years of unquenchable advocacy, Zahniser died in his sleep on May 5, 1964, at age 58. Just two days earlier he had testified at the final hearings on the Wilderness Act.

Zahniser knew it would take unprecedented effort to build the National Wilderness Preservation System chartered by the Wilderness Act. But he had tremendous faith in those who would follow. "Through this measure," he said, "we have the great opportunity of establishing a policy and program that can be expected to endure, cherished and appreciated by those who will come after us, who will surely recognize that only because of the time and trouble that we are taking, in working out such a policy and program, will the wilderness have persisted to their day. With the enactment of this measure we shall cease to be in any sense a rearguard, delaying 'inevitable' destruction of all wilderness, but rather shall become a new vanguard with reasonable hopes that some areas of wilderness will be preserved in perpetuity."—*D.W.S.*



Howard Zahniser in a 1955 photograph.

Just 30 miles from Times Square, the Great Swamp in New Jersey was designated in 1968. It was the first National Wildlife Refuge System unit to be made part of the wilderness system.

David Muench

proposals. Workshops were held to teach local wilderness advocates the details of the Wilderness Act process—and particularly to equip them to argue against agency policies and procedures that undercut wilderness proposals. Both the Sierra Club and The Wilderness Society established additional field offices to provide full-time staff assistance to local coalitions.

Often this local citizen support led agencies to improve their proposals. If they did not, these efforts created a record that wilderness leaders could take to Cabinet secretaries in an effort, often successful, to overrule the agency. On more than one occasion White House officials were persuaded to improve agency proposals before they received presidential approval.

These grassroots efforts were but a prelude to the congressional process. No handful of lobbyists dominated; dozens of citizens' groups in every state developed newly sophisticated leadership. Often at the center of these grassroots wilderness campaigns were the leaders of Sierra Club chapters and groups, which were expanding dramatically into every state during the late 1960s and early 1970s. Chapter leaders and other local activists appeared in increasing numbers on Capitol Hill, testifying and lobbying for their wilderness proposals. Dozens of bills moved through Congress, and dozens of areas were added to the NWPS.

In the 1970s, attention began to turn to the "other" wilderness resource—the federal wildlands that were not required to be reviewed under the Wilderness Act. Citizens' groups realized that if the agencies resisted their entreaties for preservation of this *de facto* wilderness, they now had a separate strategy to pursue: They could

ask Congress to designate the lands directly.

Beginning slowly, first in Montana and Oregon, then in West Virginia and Alabama, wilderness advocates persuaded members of Congress to champion legislation to preserve *de facto* wilderness. Today the question of designating these additional lands continues to dominate the politics of wilderness legislation.

Part of the resistance to individual wilderness proposals came from the agencies. For a time the Park Service sought to exclude huge "thresholds" of wildland between the edge of existing roads and developed areas and the boundaries of wilderness areas.

The Forest Service adopted a more imaginative stance. Pointing out that it had been the first to preserve wilderness areas decades earlier, the USFS adopted a deliberately "pure" interpretation of which lands would be suitable for designation as wilderness. Using their high standards, the political leaders of the Forest Service argued that wilderness status could not be granted to lands within sight or sound of roads or development. They argued that even the hint of former disturbance on the land automatically disqualified it. Taking that view to its logical (albeit absurd) conclusion, they announced in 1971 that no land in national forests in the eastern half of the country qualified for wilderness designation.

Conservationists felt this pure standard was dead wrong. If this extreme interpretation were accepted, it would not only preempt *any* wilderness in the East, but would dramatically reduce the scope of potential wilderness in national forests in the West.

The Forest Service appeared before Congress more and more frequently, asserting that areas or portions of areas proposed as wilderness by conservationists were unsuitable because impure. Echoing this chorus were the timber and mining lobbyists, who found this argument a refreshing way to oppose wilderness without actually saying so. "We love wilderness, of course," they'd say, "but this area isn't good enough."

This debate demonstrated conclusively the unrecognized good fortune that befell conservationists when they "lost" their battle to make agency wilderness proposals automatic. For it is precisely because Congress must enact each new wilderness area that conservationists had a framework within which to work to overrule agency proposals and expand their pure boundaries.

Montana's Scapegoat Wilderness, designated in 1972, was the first wilderness area to enter the wilderness system on the basis of a proposal submitted directly to Congress by citizens' groups.

"No wilderness in the East," the Forest Service had announced in 1971. By 1974, Congress had decisively rejected that purist view, adopting 15 new wilderness areas in a single omnibus law—the Eastern Wilderness Areas Act—and mandating wilderness study for dozens of additional areas in eastern national forests.

Finally, in 1978, Congress succeeded in disposing of the purity issue once and for all. Led by Senators Frank Church (D-Idaho) and Henry Jackson (D-Wash.) and Representatives Morris Udall (D-Ariz.), John Seiberling (D-Ohio), and Teno Roncalio (D-Wyo.), Congress adopted the Endangered American Wilderness Act. This omnibus bill established a score of new forest-wilderness areas, including many long resisted by the Forest Service as impure.

What had all these battles, often so protracted and seemingly esoteric, stood for? Some simple arithmetic tells the story. In 1971, using its purity criteria, the Forest Service conducted an inventory of its entire domain and found 56 million acres of roadless lands that might qualify for wilderness designation. In 1977 the agency took another inventory, but using the congressionally approved interpretations of the Wilderness Act for which conservationists had struggled so long. By best estimates as many as 14 million acres of the lands inventoried in 1971 had been roaded, logged, or otherwise committed to development in the intervening years; yet the 1977 inventory found 62 million acres that qualified (including millions of acres in eastern national forests the USFS had totally ignored earlier). The inventory of potential national-forest wilderness had "grown" by 20 million acres!

Today, America has a National Wilderness Preservation System that embodies the hard work of many thousands of wilderness advocates. Behind each preserved area there is a story of the idealism, devotion, and persistence of wilderness advocates within as well as outside the agencies.

The Wilderness System, which started with 54 units in 13 states totaling 9.1 million acres when the Wilderness Act was signed, now includes 270 units in 42 states and embraces just over 80 million acres.

This is not all there will be. The Forest Service continues to review millions of acres of roadless lands, and Congress has before it dozens of proposals for forest-wilderness, refuge-wilderness, and park-wilderness units. In 1976, Congress mandated that roadless lands administered by the Bureau of Land Management be studied under the Wilderness Act too. The BLM is studying some 24 million acres of land—and citizens' groups are advocating others the agency has chosen to ignore.

Twenty years later there is far stronger protection covering vastly more acres of American wilderness. The Wilderness Act, secured for us by one generation of wilderness leaders, provides the tool for preserving much more. □

Douglas W. Scott, the Sierra Club's Deputy Conservation Director, began his career as a wilderness advocate in 1967 as a volunteer with the Mackinac Chapter.

What Is Wilderness?

In passing the Wilderness Act, Congress did more than preserve specific wilderness; it declared a policy to preserve areas of wilderness in perpetuity:

"In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness." [Sec. 2(a)]

In declaring this policy, the Wilderness Act defined wilderness in an idealistic yet practical way:

"A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value." [Sec. 2(c)]

In setting aside wilderness to protect it, Congress also established what it considered the proper use of these areas. Hiking, backpacking, camping, rafting, canoeing, swimming, horseback riding, cross-country skiing, fishing and hunting (except in units closed to hunting, such as national-park wilderness areas), nature study, and scientific research were all deemed consonant with wilderness designation. In addition, some previously established uses, including mining and livestock grazing, were allowed to continue in some areas, and the rights of owners of private lands included within new wilderness boundaries were also protected. Activities prohibited in wilderness areas included logging, off-road-vehicle use, and such permanent developments as roads, buildings, and the construction of dams. Minimum administrative and protection facilities—such as privies, corrals, snow gauges, lookouts, and caches—are allowed, and commercial outfitters can conduct trips within wilderness areas.

In a very real sense the Wilderness Act made wilderness designation a political process. To get involved in the work of preserving wilderness, contact leaders of your Sierra Club chapter.

The Sierra Club has published an eight-page brochure that includes a current listing of all designated wilderness areas. For a copy of *National Wilderness Preservation System* (September 1983), write to Sierra Club Information Services, 530 Bush St., San Francisco, CA 94108; please enclose 75¢ (members 50¢). —*D.W.S.*

Rabbitbrush and blocks of lava typify California's Lava Beds National Monument, designated as wilderness in 1972.

RICHARD TUCKER

INDIA'S EMERGING ENVIRONMENTALISTS

DURING THE PAST DECADE the environmental movement has expanded dramatically—in both strength and scope—in all the countries of South and Southeast Asia. No country boasts stronger and more varied environmental organizations than India, the most complex of all the nations that were at one time colonies of the West.

The struggle to encourage environmentally sustainable development in India—now being fought in both urban and rural settings—involves the entire spectrum of resource-use dilemmas: air and water pollution, energy, public lands, mountain systems, and wildlands. A variety of nongovernmental action organizations are proliferating rapidly, and they are finding new allies among environmentally sensitive government planners. As a result the whole picture of environmental politics in India has been transformed.

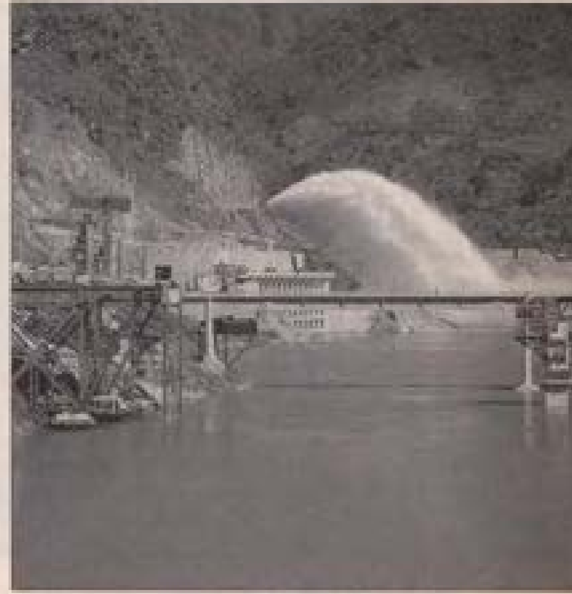
On the rural front, many issues center on the growing crises of deforestation and watershed disruption. In the Himalayan districts, timber has been a primary source of both private wealth and local government income. As it has become scarcer, this commodity has commanded skyrocketing prices in urban markets below timberline. Meanwhile, the forests have been mismanaged. Corruption is not unheard of; for decades local people have claimed that timber contractors often harvest far more trees than they buy at auction, while they convince forestry officials and guards to look the other way, and, for a modest bribe, even forge bills of sale and transit.

Now environmentalists have started to point out the ecological consequences of the timber trade's tendency to promote overcutting for financial gain. They claim that commercial overcutting is the source of ecological impacts far worse than those caused by the villagers' daily harvest of firewood and fodder for their small farms. Overpopulation on the land, environmentalists insist, is not the key to deforestation. If profit-minded logging by outsiders were stopped, the remaining soil on the mountainsides would still grow fuelwood and fodder in amounts adequate to meet the local people's needs. Furthermore, villagers would then be willing to plant and nurture the tens of thousands of seedlings that would reforest the great watersheds of the Ganges and Indus basins. The key to conservation, in the view of Indian environmentalists, is to give local people control of their own resources. Without that control, no system of sustained resource management can possibly succeed, in India or anywhere else in the Third World.

A major case in point is the Chipko Forest protest movement in the Garhwal Himalaya, just east of Himachal. The mountains of Garhwal are as sacred to Hindu tradition as the headwaters of the Ganges. Sacred or not, their coniferous forests were felled—first under Hindu rajas and then under British governors—from 1815 onward to build cities and railroad networks downriver. Colonial forest laws, beginning in 1865, attempted to mitigate the loggers' haste by setting aside reserved forests, some for sustained-yield cutting of timber and firewood, others to be left alone to stabilize especially steep, erosion-prone watersheds. In theory at least, the public interest and the interest of future generations were vested in the Forest Department. By 1900 the Indian Forest Service had become the leading forestry system of the colonial world.

But some forests remained under private ownership. Private forests, in India as in many other countries, were not controlled at all but were sold at random by their owners, perhaps to finance a daughter's dowry or a son's education. During World War II, when Japanese forces threatened India's borders, inflated timber prices meant that nearly the last of northern India's private forests were cut down, leaving only government forests standing by Independence Day in 1947.

Meanwhile, the peasants, who are still the



Water bursts through a spillway on the Bhakra Dam in Himachal Pradesh (above). The third-largest dam in India, Bhakra harnesses the hydroelectric and irrigation potential of the Satluj River. Himachal Pradesh's picturesque Kulu Valley (opposite) was once forested with magnificent deodars, some of which were 150 feet in height and 10 feet or more in girth. The state has lost nearly 1 percent of its forested lands every year for the past 25 years. Much of the wood is currently being used to make packing crates for apples.

Photos: Ulla Engeleigh

vast majority of hill people, felt excluded from the forests that had been theirs before 1865. Their crop cycles could not continue without fuelwood and building timber, leaf mulch for the fields, and fodder for their livestock. But grazing animals, their numbers growing decade by decade, presented the major obstacle to survival for the seedlings that keep forests from growing old. Reforestation, the key to the long-range health of hills and watersheds, has had a poor record in India and other peasant-based societies. Are the villagers and their animals responsible for this, or is it the commercial timber system? Each side blames the other. Environmental-action groups have to work within the framework of this well-worn controversy.

Sacks of potatoes in Manali, Himachal Pradesh, represent more food for a hungry India, but the terraced mountain fields that produce them cause severe soil erosion.

The debate in Garhwal came to a head a decade ago, when village women in a high valley threw themselves around the trees above their homes rather than let a contractor's men harvest them (to make sports equipment for the cities). They stopped that timber harvest, and thus avoided the landslides that might have resulted from the following summer's monsoon. The next—and more difficult—step was to demand a permanent halt to commercial logging in the fragile mountains. Chandi Prasad Bhatt, a social worker and labor organizer in the district, was soon in the state capital demanding a logging moratorium. He argued that the villagers would gladly plant and nurture new forests if the Forest Department would only keep outsiders out. Then, he insisted, the foresters could return to their basic role of providing the technical support necessary to meet the mountain people's needs. This in turn would guarantee that the upper reaches of the Ganges would remain stable.

The debate centers on how to reconcile conflicting needs for timber and still preserve the Ganges and its watersheds. The stakes are very high, for the Ganges Basin, from the Himalaya 1,500 miles downriver to the Bay of Bengal, sustains life for 200 million people or more. In recent decades monsoon flooding has become more frequent and destructive, while runoff into the rivers during the long dry season has declined. Floods from the 1970 monsoon began in the upper mountains (in the area where the Chipko movement was soon to begin) and devastated thousands of acres of farmland downriver. This was but a preview of 1978, when the worst floods in many years covered more than 20 million acres of the Ganges plains as far downriver as Bengal. Heavy late monsoon rains precipitated the floodwaters, but only because the watersheds in both the Indian Himalaya and similar Ganges tributaries in Nepal could no longer slow the force of the storms.

By that year an unprecedented coalition was building, uniting the Himalayan village protest movement with environmental planners and activists as far away as New Delhi. A long bridge had to be built between semiliterate villagers, who knew their mountainsides intimately, and highly educated urbanites, some of whom were more familiar with London and New York than with the upper Ganges. Mahatma Gandhi's associates provided an early link between city and village, capital and mountains. Gandhi had argued throughout his career that rural society's needs must be attended to before the expansion of cities and heavy industry, because the villages are where most of the people live. In 1970 his associates formed the Himalaya Seva Sangh (Society for Serving the Himalaya), to work for peace in conflict-ridden mountain regions such as Assam and adjacent tribal areas in the northeastern Himalaya. They soon recognized that social justice is inseparable from ecological stability, for poor tribals and peasants are usually the first to be ruined when erosion and flooding are severe, and the powerless are usually forced to squat on forest and mountain lands. In mountain lands especially, poverty is one of the worst ecological threats.

In upper Garhwal one Gandhian worker, Sunderlal Bahuguna, himself the son of a forester, joined the Chipko crusade; he now walks throughout the Himalaya urging villagers to manage their own forest resources. Working with both Sunderlal and Chandi Prasad, the Himalaya Seva Sangh sent environmental journalists to report the Chipko story in the national press. By the late 1970s the controversy over forestation strategies in the Himalaya had become the best-known environmental story in India.

During this period the government of India was also working to improve environmental planning in its development programs. As early as the Stockholm Conference in 1972, Prime Minister Indira Gandhi issued a call for environmentally sound development in the poor countries of the world. That same year the central government formed a National Committee on Environmental Planning, which has functioned in some ways as the Environmental Protection Agency does in the U.S., gathering detailed data on natural ecosystems, studying the environmental impact of development projects, and monitoring air and water pollution. Similar agencies were set up in some state governments to study the need for environmental legislation and to find ways of implementing existing laws more effectively. Then, in 1980, the Department of Environment was established in New Delhi, coordinating the environmental planning of several agencies within the national government. From the start one of its principal concerns has been the forest law and its administration.

By 1981 the combination of concern on the part of the central government and the pressures brought to bear by the Chipko movement and its urban allies had led to a moratorium on commercial timber operations in some parts of the Himalaya. High-level study commissions are working to define a viable long-range strategy for using and sustaining the mountain forests.

Similar pressures operate on a national scale. In early 1982 the Indian Parliament was presented with a new draft forest law, which would have strengthened the Forest Department's power to enforce restrictions

Sheep overgraze a mountain meadow in the Kashmir Himalaya. Overgrazing and deforestation of Himalayan watersheds exacerbate the region's perennial flooding problems.

on cutting and grazing in the reserves. Politicians, villagers, and environmentalists alike responded with a storm of protest. They all attacked the bill as one that would give foresters nearly dictatorial powers to harass villagers already facing misery under the bureaucrats and their corrupt allies. Environmental groups defending the tribal communities of hill regions throughout India presented evidence that forest guards were harassing tribal hunters whose livelihood depended on the products of the forests. Timber contractors were accused of cutting (legally or illegally) in tribal forests and refusing to pay the tribal laborers they had hired. The World Bank was accused of destroying peasant and tribal cultures in several regions of India by financing reforestation with a dense monoculture of tropical pines or eucalyptus.

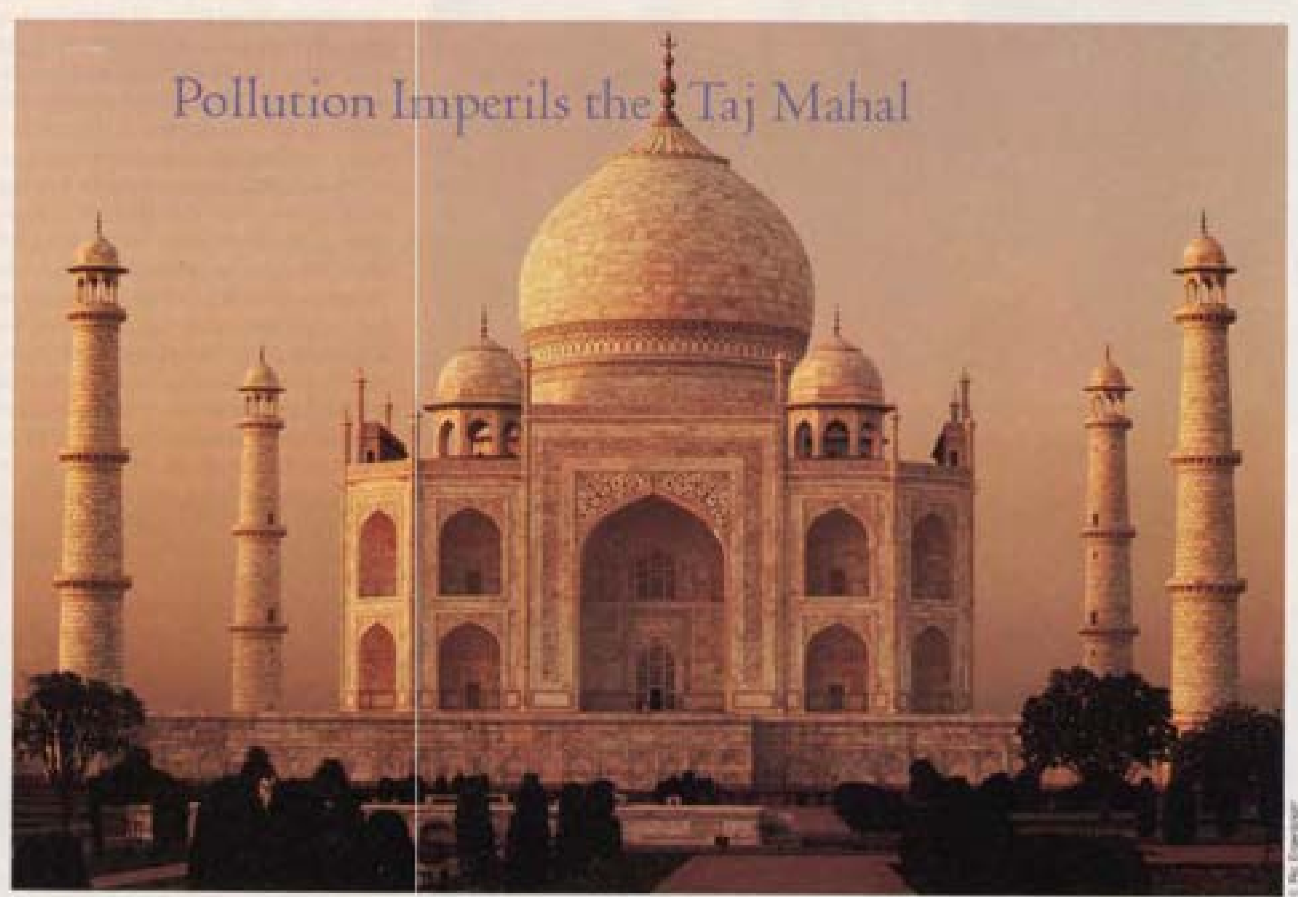
The heart of the ecological issue was becoming clear. Development strategies that reduce the complex natural ecosystem to commercial monocropping also reduce the capacity of rural people to survive. The result is local opposition to commercial reforestation; no reforestation at all can occur then. A strategy that called for putting more power into the foresters' hands without simultaneously strengthening the villagers' control of their own ecological base could no longer muster a majority in Parliament. A major change had occurred in the politics of India's natural resources.

Thus there is a powerful new constituency for watershed stabilization in India, a coalition of tribal and peasant movements, urban environmental groups, and environmental agencies within the government. But in river basins where flowing water can be harnessed for hydropower, the dilemmas over priorities in resource use are even more difficult to resolve. Third World countries are chronically short of energy to power both industrialization and the "green revolution" in agriculture. Since 1973, oil prices have risen painfully in India, and because the country's great stores of soft coal cannot alone solve its energy needs, India must turn to nonfossil fuels. India's hydropower resources are vast, and unlike nuclear fuel they are capable of producing power while leaving no radioactive waste. But there is danger implicit in developing this resource on a wide scale. Many of India's hydroengineers have been trained in the United States, and for 40 years they have seen the Tennessee Valley Authority as the most important model for water-resource management in the Third World. How closely the TVA is followed by designers of river-basin projects in India varies from case to case. But most people in political power have agreed that new dams contribute to both rural and urban progress, and have supported their construction as a high domestic priority.

Recently, environmental groups have begun charging that this conventional wisdom is short-sighted. Fifteen hundred miles south of the Himalaya, in the lush subtropical hills of Kerala state, there has been an intense debate over whether to dam the Silent Valley, one of India's few nearly natural subtropical forests. Remote from major towns or highways, the valley has experienced relatively little timber-cutting and almost none of the peasant or tribal farming that has changed the rest of rural India. Biologists had long been interested in the valley for its vast variety of animal and plant life, including the endangered lion-tailed monkey and varieties of wild rice that are among the few rice types naturally resistant to the brown plant-hopper, the scourge of the "rice revolution." But in the early 1960s the state government began planning a hydropower dam for the Silent Valley, convinced that electricity was the key to economic progress in the region.

The Kerala People's Science Movement (KSSP) decided otherwise. It began in 1957 as a network of rural schoolteachers and others who set out to encourage scientific awareness in the countryside and to organize small-scale scientific projects in the villages. In its first years the KSSP worked with small farmers, rural social workers, and others to improve public health, water supplies, elementary schools, and other village services. Their basic principle—one often forgotten by other movements—was to learn from the villagers themselves what their top priorities were. Environmental concerns arose almost automatically. Villagers in many parts of the state were discovering that aggressive settling of landless labor in the hills, new paper and rayon mills in three river valleys, and clearcutting of timber in the upper watersheds were all contributing to disruption of

Pollution Imperils the Taj Mahal



DARRYL D'MONTE

"YOU CAN TAKE AWAY the Taj Mahal stone by stone; we want the oil refinery." That's what the Agra Chamber of Commerce reportedly told the Indian Oil Corporation (IOC), the state-owned company that runs the newly completed refinery at Mathura, 40 kilometers from the famous 17th-century mausoleum. A local politician amplified the chamber's sentiments: "So what if the Taj is threatened by the fumes from the refinery? A thousand jobs are more important than preserving these slabs of marble."

Arrayed against such development-at-all-costs notions are the opinions of concerned Indians, who with renowned ornithologist Salim Ali wonder if the refinery couldn't be located at some less risky site, thereby allaying "the not unreasonable fears of people like myself to whom [the Taj Mahal] is a more vital concern than any economic consideration."

The need for a refinery in the northwest of India was recognized as early as 1966, at the dawn of the Green Revolution. That breakthrough in the production of high-yield food grains placed greater demand on oil products for use in tractor fuel, irrigation pumps, and fertilizer. At the time, no one in the IOC or the government had the slightest inkling that sulfur dioxide released by the refinery might waft toward Agra and, mixed with oxygen and water in the atmosphere, form sulfuric acid that could corrode the gleaming marble of the Taj Mahal. The West calls the phenomenon acid rain and the affliction "marble cancer."

J. M. Dave, head of the School of Environmental Sciences at Jawaharlal Nehru University in New Delhi, first drew attention to the possible dangers of locating a refinery so close not only to the Taj but to the other famous monuments in Agra. Akbar's tomb, the fort, and the abandoned capital of Fatehpur Sikri all rank among the most visited tourist sites on the globe.

The refinery was partly commissioned early in 1982, four years behind schedule, largely because of the controversy over its environmental impact. The go-ahead was given based on a report from an expert commission formed at Indira Gandhi's request in 1974, after a number of alarming stories in the press and repeated questions in Parliament. The committee was headed by Dr. S. Varadarajan, then-chairman of giant Indian Petro-Chemicals Ltd. and one of the nation's leading technocrats. Varadarajan appointed the Italian firm Tecneco to conduct the studies because it was one of the few organizations in the world to have looked into the consequences of oil pollution (specifically in Venice).

The committee ruled out any direct danger to the Taj Mahal from the Mathura refinery, primarily because the IOC planned to use low-sulfur crude from Iraq or from India's own offshore field. This would reduce sulfur-dioxide emissions to one ton per hour—well within manageable limits. Instead, the committee found that the existing levels of pollution in Agra were exceedingly high and recommended certain mitigating measures. These included closing down the two thermal power stations in the town, dieselizing the railway yard, banning all new industries near the monuments, and shifting 250 iron foundries to the outskirts of town. All but the last have now been done, and as a result sulfur-dioxide levels in Agra have fallen 75 percent. IOC officials have pointed to this fact and claimed,

sarcastically, that the Mathura refinery is the best thing that could have happened to the Taj.

In spite of assurances from the Varadarajan committee and the government, some experts remain unconvinced that the Taj will be out of danger when the refinery goes into full-scale production. Much seems to revolve around the continued use of low-sulfur crude. Questioned closely, IOC officials admit they can only hope the government will always use such crude—even to the extent of importing all the refinery's crude if the

The Taj Mahal, resplendent against a backdrop of smog. Acid rain could damage the monument's finely detailed marble.

Darryl D'Monte

need arises. The refinery may also expand its capacity from 6 million to 10 million tons a year, as it was designed to do. What effect that will have on Agra's monuments is anybody's guess.

The truth is that more is known about the effects of sulfur dioxide and other pollutants on the human body than is known about how marble reacts to them. As a matter of fact, the body has more built-in defenses against such pollution than does inert stone. This is why a leading international expert in the restoration of historic sites expressed his nagging doubts about the safety of the Taj. The conclusions of one of Tecneco's expert consultants do little to assuage those doubts. In a letter to the IOC he wrote, "The Tecneco study will not give a 100-percent-safe forecast. Any increase in pollution in the long run is dangerous . . . . I repeat that even a one-percent risk is far too high for an object like the Taj Mahal." As some Indian Archaeological Survey officials assert: "Let posterity not say that we didn't warn about the consequences of this folly."

Darryl D'Monte has written on environmental issues for a number of English-language newspapers in India. He lives in Bombay.

their streams and water supplies. Although the KSSP faced a major task in organizing a statewide campaign to ensure that the people of Kerala would not lose their forests and water supplies through short-sighted development strategies, the Silent Valley had given them the political issue they needed as a focus for other activities.

As the debate over the Silent Valley accelerated, KSSP leaders not only warned against the downstream effects of the proposed project but challenged the very idea that another expensive dam would truly benefit the rural majority. Most of the hydropower produced by the dam would be exported to other, more highly industrialized states. The local landscape would be disrupted, while the only people in Kerala to benefit would be a handful of politicians and industrialists in Trivandrum, the state capital.

Environmental organizations throughout India and abroad joined the debate, finally bringing the issue directly to the prime minister's office in New Delhi. Indira Gandhi turned to the planning commission's leading member (M. S. Swaminathan, the world-famous father of India's Green Revolution and now the patron saint of the Indian environmental movement) to do a careful study of the issue. His report raised grave doubts about the project's value and recommended a more thorough investigation into its long-range impact. But every political party in the state favored the dam. Even the Kerala Forest Department supported it, anticipating the work of clearcutting the area that would be flooded by the reservoir.

The central government in New Delhi, backed by growing international concern, continued to apply heavy pressure against the project, and finally the state government cancelled the plan for the dam, turning the wild high hills into a national park. Environmentalists celebrated a major victory, one that could not have been won without the tenacious efforts of voluntary organizations.

The Silent Valley dam controversy raises many of the same issues as the series of dams built in or being planned for the Himalaya, where snowfields and glaciers lock up the world's greatest potential hydropower resources. Ever since independence was won, India has made a high priority of developing those resources for the energy-starved plains below. Mahatma Gandhi would have disapproved, but his protégé Nehru and most other economic planners have supported rapid industrialization. A series of high dams in the Himalayan gorges of India and Nepal have been built or designed, many of them with foreign assistance in both design and construction.

In recent years environmental voices have warned of the ecological dangers of these dams, and stormy debates have ensued. They center on the high dam at Tehri (just below the Chipko homeland in Garhwal), upon which construction began in 1978. Designed to tower more than 700 feet high—which would make it the fifth-highest rock-filled dam in the world—the Tehri dam is to provide 2,000 megawatts of power to the energy-short central Ganges plain, control floodwaters in the monsoon season, and provide irrigation water during the dry months to some 1.5 million acres of farmland. No one has challenged these goals in principle, but many have warned that this design is likely to have unacceptable ecological costs. Experts outside the government disagree with the Geological Survey of India, asserting that the dam site is geologically active and that the 3.2 billion tons of water in the planned reservoir could trigger earthquakes. Further, the river channels above the site carry some of the heaviest silt of any river on the globe. The usable life of the dam may well be only one third of the official prediction of 100 years.

Local opposition to the dam, which may displace as many as 70,000 people, culminated in a Gandhian sit-in on the dam site in early 1978, in an attempt to prevent groundbreaking. The organizers argued that a series of small dams at several locations on the river would be far less hazardous, less expensive, and less disruptive of the lives of Garhwal's people. Many participants in the civil-disobedience campaign were given prison sentences, but were soon released as part of an agreement to continue the controversy through legal channels. The dam is slowly rising now, constructed by thousands of landless laborers from the plains, while villagers who will be displaced by the reservoir are being resettled on government forest lands in the foothills.

An independent commission was established to reassess the Tehri project's planning and execution. Although its report is not expected to stop the dam, it may help to guarantee more environmentally sound planning of future dams in the Himalaya as well as farther south. The public is far more aware now of the full environmental consequences of hydropower development, and —more than ever before—environmental organizations are accepted as legitimate contributors to the public-debate and governmental-planning process. The work of the past five years, and the many years of preparation for India's environmental movement before that, may be starting to pay off. □

Richard Tucker is on the history faculty at Oakland University in Rochester, Mich. Professor Tucker is a member of the Sierra Club's International Committee.

New! TTL Flash Metering

Automatic through-the-lens flash metering gives you precise exposures with the new Nikon SB-102 Speedlight.

New! Manual Shutter Speed Control

Shutter speeds from 1/30 to 1/1000 second give you creative control through precise exposure compensations.

New! LED Viewfinder Display

Even in manual or automatic mode you'll easily see the shutter speed displayed via bright LED's.

Accepts all current Nikonos lenses and accessories. Larger, easy-to-read frame counter. A new super secure camera back lock and a newly designed O-ring seal assures even greater water-tight integrity. For further information please contact Nikon Inc., 623 Stewart Avenue, Garden City, N.Y. 11530. Lit/Pak #56.

New Nikonos-V. The best gets better.

NIKONOS-V

Nikon

We take the world's greatest pictures.

© 1984 NIKON INC

ELECTION 1984

RONALD REAGAN AND THE LIMITS OF RESPONSIBILITY

CARL POPE

Ronald Reagan took office in 1981 having publicly renounced the environmental-protection policies of the previous decade. His criticisms were later broadened by Interior Secretary James Watt, who called for the reversal of "50 years of bad government" at the Department of the Interior.

But the Reagan reversal has stalled. Watt, Anne Gorsuch, and the architects of many other Reagan environmental programs are gone, and officials of a far more moderate bent or manner have taken their place. Purchase of parklands has resumed, coal and offshore oil leasing has been suspended, and the Clean Air Act is still intact.

The fundamental question that faces environmentalists as the presidential election approaches is this: Have Ronald Reagan and the people around him abandoned their environmental strategy, or have they merely put it on hold until after November?

There have been some potent arguments put forth that Reagan, if reelected, will not resume the offensive against the environment that marked his first three years. One argument is based on his record as governor of California: After two years of strong antagonism, Reagan, while hardly a progressive, became largely passive on environmental matters during his last six years in Sacramento. Another is the enormous political price the administration (and the Republican Party) paid for Watt and Gorsuch. A final reason to expect moderation from a second Reagan administration is the lack of a visible constituency, even within the business community, for a resumption of Watt-Gorsuch policies.

Such arguments will be made, but there is substantial reason to doubt that, on crucial issues, they will prevail. The entire ideological thrust of Ronald Reagan's presidency makes it unlikely that he will continue the present tempo of moderation; rather, there is every reason to believe the Watt-Gorsuch agenda is the *real* Reagan agenda, to which he (and his appointees) will return if reelected.

The frontier society to which Reagan often refers was one in which all people pursued their own interests, with minimal concern for the risks involved, the impacts on their neighbors, or the needs of the future. By 1980, Reaganites believed that this frontier ethic had been replaced by a new and dangerous concept of responsibility. Americans, through their government, were trying to minimize the risks they had to face. The freedom of individuals and corporations to pursue their own interests aggressively was being impeded by the demand that the interests of the affected community be taken into account. Present opportunities were limited by the insistence that more emphasis be placed on the needs and wishes of future generations.

All of this was deeply threatening to Reagan and his followers. They were exponents of frontier-style capitalism—and of a corresponding notion of responsibility. Reagan's favorite economist, Milton Friedman, has been an eloquent advocate of this point of view. Friedman rejects the notion that corporations, which have largely replaced individual entrepreneurs as economic actors, should display "social responsibility." His thesis is that corporations have been given control over stockholder investments for the sole purpose of making money, and that they therefore have an obligation to pursue profit to the exclusion of other social values.

While Friedman agrees that government has the right to impose certain regulations on corporations to ensure that they behave responsibly, the Reaganite notion of the appropriate extent of these limits is itself severely limited. One of the three major planks of Reagan's election-year economic program was that American society in 1980 was dramatically *overregulated*, and that too many restrictions had already been placed on individual initiative.

Watt and Gorsuch were not accidents, nor were they the simple result of Reagan's dim and shadowy understanding of ecological realities. In almost every federal agency and department, Reagan and his followers have sought to use the power of government to increase the level of risk that society is expected to tolerate, to exalt individualism and individual interests at the expense of the community and its values, and to limit the degree to which we make sacrifices today in the interests of the future.

The Reaganite attitude toward risk is graphically illustrated by the changes in the Environmental Protection Agency's pol-

"A tree's a tree—how many more do you need to look at?"

Governor Reagan, 1968, commenting on the Redwood National Park controversy

Wide World Photos

icies regarding cancer-causing toxic materials. Prior to Reagan the EPA tried to keep the risk of cancer from exposure to toxic substances down to one additional case of cancer for every million people exposed. Reagan's toxics chief, John Todhunter, effectively increased this risk a hundredfold by proposing to deregulate substances that cause (or that are projected to cause) as many as one additional case of cancer per 10,000 people exposed. Todhunter further refused to regulate materials that had been proven to cause cancer in laboratory animals, saying he would not act until there was actual evidence of human cancer—the so-called dead-body syndrome. Todhunter and the Reaganites believed that to hold an industry responsible for the cancer-causing potential of its chemicals would be a major hindrance to its member companies' freedom to compete. And the Reaganites were willing to run the risk of 200,000 additional cases of cancer *per chemical* as a means of preserving that freedom from responsibility.

Unfettered individualism is another hallmark of the Reagan ethic. Reaganites believe that public, community use and control are intrinsically inferior to private, individual development and control. The Clean Water Act of 1972 called for the restoration of America's rivers and waterways to a level of water quality suitable to community uses—swimming, boating, and fishing. One of the major policies of the Gorsuch regime at the EPA was to relax water-quality standards in numerous areas to give priority to the private use of streams for the disposal of sewage and other wastes. Similarly, the Reagan administration refused to sign the Law of the Sea Treaty because it gave the international community a vested interest in the seabed, its environment, and its natural resources. Reaganites wanted and continue to seek an unfettered right for American corporations to exploit the seabed on a private basis. Efforts to privatize the public lands reflect the same hostility toward community control and use, as does the proposal in the 1985 budget to raise park fees so that those who use parks, rather than the community, would pay for their preservation.

Another threat to the Reagan ethic is concern for the future. Since Theodore Roosevelt, every administration before Reagan's paid at least lip service to the notion that the forests and mineral resources of the public lands should be leased to private interests only as needed, and always in a way that guarantees that one generation of Americans will not deprive their children and grandchildren of their natural inheritance. The Reaganites reject this notion. Former Interior Secretary Watt denies that he said we ought not to preserve mineral resources for future generations—because there might not be very many future generations—but he did proceed to try to lease *all* of the nation's offshore oil reserves within five years. Fulfillment of this policy would effectively deplete the entire offshore oil reserve in the next 35 years, leaving nothing for the future. And John Crowell, overseer of the Forest Service, bluntly told Rep. Jim Weaver (D-Ore.) "No" when Weaver asked him, "Do you think we should preserve part of our national forests for future generations?" The Reagan ethic is rooted in the notion that there will always be new frontiers to replace the lands that are used up . . . but in modern circumstances this translates into a one-generation society.

If the Reaganites seek to reinstate a concept of restricted responsibility, how can we characterize the broader definition that they seek to counter? Ironically, its simplest expression comes from an era when government played the kind of limited role that Ronald Reagan espouses. John Muir, writing in the early part of this century, pointed out, "When we try to pick out anything by itself, we find it hitched to everything else in the universe." It is this "ecological" concept of responsibility—the idea that we should act on the basis of the connectedness of things, that events do have consequences—that the Reaganites seek to expunge from American society.

Because they see the ecological concept of responsibility as the enemy, the Reaganites have always had a tremendous hostility toward environmental groups. Reagan's close advisor, the late Justin Dart, once complained that "environmentalism is the disease of modern society." Another advisor, Ed Meese, once quipped that "a Sierra Club member is someone who already has his second home at Tahoe." The President himself once dismissed environmentalists as those who would "turn the White House into a bird's nest."

Indeed, on the day of the Iowa caucuses this year, when Reagan made his nastiest attack to date on his Democratic opponents, he summed up his case by saying that they are "captives of an antigrowth, dinosaur mentality." Environmentalists are the enemy not because Reagan dislikes the outdoors—in fact, he enjoys it—but because they are among the most eloquent, and popular, advocates of the ecological concept of responsibility and community.

Given its antagonism toward this interpretation of responsibility, a second Reagan administration could not take a moderate environmental course. An examination of the major environmental controversies facing the present administration demonstrates this point.

One major environmental issue that plagues the Reagan administration is protection of groundwater from toxic wastes. Under Ruckelshaus the EPA has begun to spend the Superfund to clean up abandoned dumpsites, but the agency has done nothing to strengthen the rules that govern dumpsites still receiving wastes. Many are located over aquifers used for drinking water or agriculture, and under current EPA plans most will not be reviewed for safety for a decade. Wastes continue to be dumped at these sites, although 60 percent of the facilities are out of compliance with the EPA's minimal interim rules.

The EPA has the authority, and probably the duty, to shut down any landfill that poses a potential threat to an aquifer. It is not using this authority, despite overwhelming public sentiment in favor of protecting drinking water. Congress is considering amendments to the Resource Conservation & Recovery Act that would compel the EPA to phase out landfilling of persistent toxic wastes, but the administration does not support these amendments. This lack of endorsement may become a major campaign issue against the President.

Reagan knows this. Budget Director David Stockman knows it. EPA Administrator Ruckelshaus knows it. Why, then, do they not act? Because strengthening the law would mean agreeing that society should not risk even small concentrations of toxic chemicals in drinking water, and even the moderate Ruckelshaus is convinced that society has become too worried about the risks of toxic pollutants. "We must assume that life now takes place in a minefield of risks from hundreds, perhaps thousands of substances," he stated soon after taking office. "We can no longer tell the public that they have an adequate margin of safety . . . but we must all reject the emotionalism that surrounds the current discourse and rescue ourselves from the paralysis of honest public policy that it breeds."

Although he is attempting to increase public acceptance of the inevitability of chemical risks, Ruckelshaus is at least willing to grant that the risks are significant, often excessive. The orthodox Reaganites, however, view any concern over these risks as a component of the "softness" that has crept into American society, a softness they are dedicated to eradicating. A willingness to run risks is the essence of their view of capitalism, and they do not distinguish between a businessman risking his own assets on a new product and a chemical company risking the health of the neighboring community with its new product.

Air pollution is another issue of great controversy facing the administration. Should Reagan, for example, move to clean up acid rain? The EPA's Ruckelshaus clear-

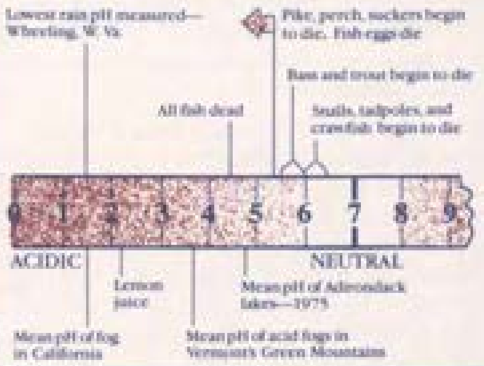
What do President Reagan, Senator Robert Byrd, and the electric utilities have in common?

They all want to block action to clean up acid rain.

What do the Sierra Club, the National Academy of Sciences, and millions of Americans have in common?

They all want immediate action to clean up Acid Rain.

The pH Scale and Acid Rain



If you are one of the millions for whom willingness to clean up acid rain is the litmus test of a commitment to the environment, please return one of these post cards to us **today**. And then give the others to friends who agree with you but who are not yet members.

This is the first step in mobilizing millions to stop acid rain in 1984. By signing up, you and your friends will let our nation's leaders know **you want action now**. The campaign will let you know other steps you can take to curb acid rain. The Sierra Club is being joined in this effort by the National Clean Air Coalition and dozens of other environmental and citizens groups. **Together we can stop acid rain.**

STOP ACID RAIN

Member's Card

☐ **Yes**, let our politicians know that I support the Campaign to Stop Acid Rain. A commitment to clean up acid rain is ***the litmus test*** for corporations and government, and I can't accept the "let's-just-study-the-problem" excuse.

☐ **In addition**, I want to work actively as a volunteer in the Campaign to Stop Acid Rain. Please put me in touch with the effort in my community.

☐ **Count on me as a Recruiter** in the Campaign to Stop Acid Rain. Send me a *Litmus Test Kit* for my local lakes and rainfall, and *five more postcards*.

PLEASE PRINT CLEARLY

NAME: ______________________________

ADDRESS: ______________________________

CITY: ____________ STATE: ____________ ZIP: ____________

My 8-digit Sierra Club member number is ______________________
(from your *Sierra* label)

STOP ACID RAIN

☐ **Yes**, let our politicians know that I support the Campaign to Stop Acid Rain. A commitment to clean up acid rain is ***the litmus test*** for corporations and government, and I can't accept the "let's-just-study-the-problem" excuse.

☐ **In addition**, I want to work actively as a volunteer in the Campaign to Stop Acid Rain. Please put me in touch with the effort in my community.

☐ **Count on me as a Recruiter** in the Campaign to Stop Acid Rain. Send me a *Litmus Test Kit* for my local lakes and rainfall, and *five more postcards*.

PLEASE PRINT CLEARLY

NAME: ______________________________

ADDRESS: ______________________________

CITY: ____________ STATE: ____________ ZIP: ____________

STOP ACID RAIN

☐ **Yes**, let our politicians know that I support the Campaign to Stop Acid Rain. A commitment to clean up acid rain is ***the litmus test*** for corporations and government, and I can't accept the "let's-just-study-the-problem" excuse.

☐ **In addition**, I want to work actively as a volunteer in the Campaign to Stop Acid Rain. Please put me in touch with the effort in my community.

☐ **Count on me as a Recruiter** in the Campaign to Stop Acid Rain. Send me a *Litmus Test Kit* for my local lakes and rainfall, and *five more postcards*.

PLEASE PRINT CLEARLY

NAME: ______________________________

ADDRESS: ______________________________

CITY: ____________ STATE: ____________ ZIP: ____________

Place a 13c stamp here

Acid Rain Campaign
Sierra Club
530 Bush St.
San Francisco, CA 94108

Stop Acid Rain

Member's Card

Place a 13c stamp here

Acid Rain Campaign
Sierra Club
530 Bush St.
San Francisco, CA 94108

Stop Acid Rain

Place a 13c stamp here

Acid Rain Campaign
Sierra Club
530 Bush St.
San Francisco, CA 94108

Stop Acid Rain

What Have They Done to the Rain?

The problem of acid rain worsens every day. The rain in the eastern U.S. and pockets in the West averages 30 to 40 times more acidic than normal. This is due to sulfur dioxide and nitrogen oxide emissions, which have doubled over the last 30 years. The result:

- The National Academy of Sciences estimates that acid rain costs the eastern U.S. $5 billion a year in damages.
- Thousands of lakes and streams in North America are already dead.
- Acid rain leaches toxic metals into drinking water supplies.
- Sulfates from sulfur dioxide emissions threaten public health.
- Acid rain is causing $2 billion a year in damages to buildings and monuments.
- Forests are suffering from stunted growth and dieback.

The only way to stop acid rain is to stop it at its source — primarily sulfur dioxide emissions from coal-fired power plants. The National Academy of Sciences recommends that acid deposition be cut by 50%. This means reducing annual sulfur dioxide emissions by 12 million tons in the eastern U.S. Contrary to industry propaganda, we can do that while protecting jobs — and at reasonable cost.

Senator Robert Stafford (R-Vermont), Sen. George Mitchell (D-Maine), Rep. Henry Waxman (D-California), and Rep. Richard Ottinger (D-New York) are leading the effort in Congress to clean up acid rain by amendments to the Clean Air Act.

The Sierra Club and six northeastern states have sued the Environmental Protection Agency to try to prod it to action. Some states have initiated their own clean-up programs. Canada and several European countries have negotiated an international treaty on acid rain, and Canada has been trying to negotiate one with the U.S.

All efforts in this country have been blocked by an alliance of the Reagan Administration, a few members of Congress led by West Virginia Senator Robert Byrd, and powerful utilities and coal companies.

Only the united action of millions of Americans can overcome this alliance. That's what the National Campaign to Stop Acid Rain is all about. To join, please return your postcard . . . and recruit two friends to do so as well.

ly thinks so. "There is no longer any question that acid rain is a serious problem or that sulfur-stack emissions are a primary contributing cause," he pointed out to the Izaak Walton League last July. But Budget Director Stockman, one of the principal advocates of the concept of limited responsibility, strongly disagrees. And so far, even in the face of Harris polls showing that 90 percent of the public sees acid rain as a serious problem, Stockman is winning. The President, after announcing that action on acid rain was Ruckelshaus's first order of business, turned down his administrator's proposed control program and went back to a policy of "research only, no action."

Again, *why* no action? One theory might be that the administration is not shrewd enough to read public-opinion polls. But even Reagan's harshest judges would hesitate to criticize his ability to read the public pulse—and it is a matter of record that Reagan's pollsters have told him the public wants acid rain cleaned up, now. Controlling acid rain clearly means more to the Reaganites than just spending money to solve a problem. As the President's signing of a multibillion-dollar farm bill opposed by Stockman shows, he *is* willing to spend money to solve political problems.

For the Reaganites, cleaning up acid rain would further strengthen the troublesome belief that everything is hitched together, and that corporations must be held responsible for the effects of their deeds. An acid-rain cleanup program would force private companies to pay for the protection of community resources. It would require that midwestern utilities change their operating methods to protect the lakes and forests of the New England fishing community. It would, in most proposals, require California electronics companies to pay slightly higher utility bills to help finance the cleanup of midwestern smokestacks. And it would, in effect, vest in the American people a kind of property right in unpolluted rainfall, a property right that private polluters would henceforth have to respect.

It is no surprise, then, that the Reagan administration is opposed to an acid-rain control program that would benefit the broader community at the expense of private corporations.

The third great environmental issue hurting Reagan is his management of public lands. Public lands are *community* resources, and they are kept that way in large part on behalf of the future. Their very existence is a challenge to the Reaganite ethic of limited responsibility, and James Watt's departure has not changed this.

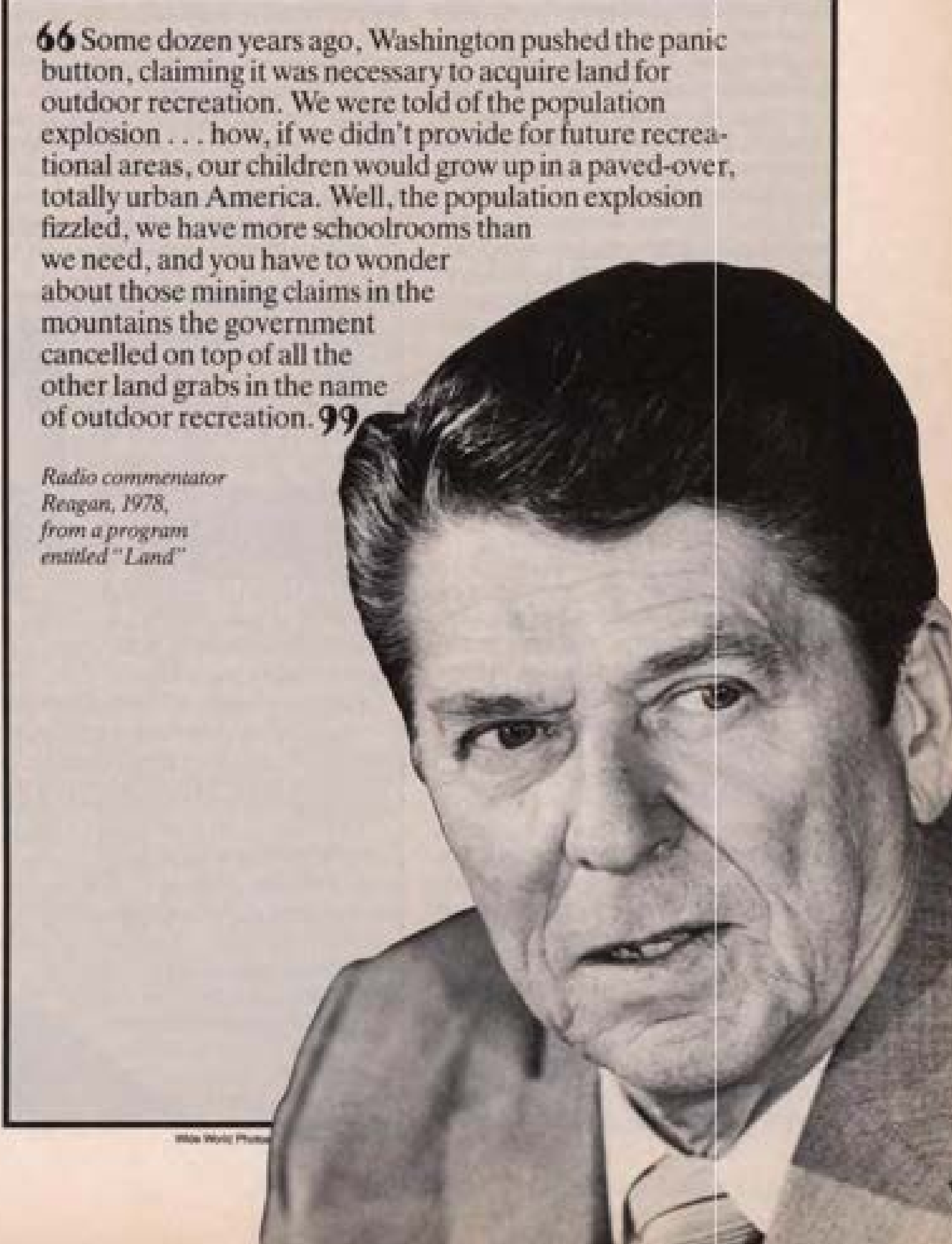
William Clark has asked for some money to purchase parks—but his request is for only two thirds of the amount that Congress made Watt spend in the previous year. The outer continental shelf (OCS) leasing program has been slowed—but the Interior Department has pursued court challenges designed to give it a free hand to lease after November. Coal leases have been postponed, but only through 1984. The administration has continued to cut back on wilderness recommendations and has withdrawn a previous proposal that would designate the Tuolumne River a wild-and-scenic river. The basic thrust, even in an election year, continues to be that public lands must be opened up for rapid exploitation by this generation, not conserved for the future. To reverse course, to begin preserving public lands for our grandchildren, would be to reject the basic Reaganite tenet that the present takes care of itself and that the market takes care of the future.

What can we anticipate from a second Reagan administration? Ruckelshaus has said he will leave the EPA in 1985, and his appointees, mostly qualified moderates, expect to leave with him. Clark has already laid the groundwork for a resumption of massive leasing and minimum wilderness protection, and there is some speculation that he will leave Interior after the election, thus opening the department for a neo-Watt appointee. Stockman has planned the 1986 cuts in the EPA budget, and he is floating the idea of abandoning the entire federal structure of environmental regulation in favor of "incentives" to business to clean up. Powerful ideological forces will thus drive the administration back toward the policies of Watt and Gorsuch.

The biggest single change could be in the Supreme Court. Even today the court frequently overrules favorable environmental decisions that come up from lower courts;

66 Some dozen years ago, Washington pushed the panic button, claiming it was necessary to acquire land for outdoor recreation. We were told of the population explosion . . . how, if we didn't provide for future recreational areas, our children would grow up in a paved-over, totally urban America. Well, the population explosion fizzled, we have more schoolrooms than we need, and you have to wonder about those mining claims in the mountains the government cancelled on top of all the other land grabs in the name of outdoor recreation. 99

Radio commentator Reagan, 1978, from a program entitled "Land"


Wide World Photos

Reagan in his second term could have an opportunity to nominate as many as three or four justices. Likely candidates would include Interior Secretary Clark, who during his years on the California Supreme Court delivered a series of 16 opinions in which he took the anti-environmental side. Another prominent name mentioned is Ed Meese, the conservative keeper of the Reaganite flame and stalwart defender of Watt and Gorsuch who, at press time, was running into opposition to his nomination as Attorney General. Indeed, high among the list of candidates Reagan would certainly consider would be the former Interior secretary himself. What better way for Reagan to have the last laugh on environmentalists than to depart the White House in 1988 leaving behind him Justice Watt at the Supreme Court?

A second Reagan administration would likely include in its legacy a Supreme Court deeply imbued with the belief that environmental regulation is not only bad policy but unconstitutional. The probable result would be to cripple future Congresses and administrations in their efforts to protect the environment, just as for years the Supreme Court prevented effective economic regulation of corporations.

But the short-term damage of a second Reagan term would be extensive as well. For example, as noted previously, the EPA now expects to take a decade to evaluate current hazardous-waste dumpsites for safety. Because the volume of hazardous waste is increasing dramatically each year, as much waste will be dumped in the next decade as in all previous years put together. And because few of today's dumpsites are safe, the overall dimensions of the hazardous-waste problem could easily double in the next 10 years if Ronald Reagan is reelected.

In the pollution area, all of the EPA's basic statutes will expire this year unless they are renewed. The Clean Air Act, for example, desperately needs strengthening to deal with acid rain and toxic pollutants. If Congress acts at all, it will probably make these improvements. But if Congress does not act in 1984, then sends Ronald Reagan a Clean Air Act renewal in 1985, there will no longer be any overwhelming political obstacle to a presidential veto of an acid-rain program or a toxic-pollutant-control amendment that Reagan may find excessively "burdensome," too scrupulous in its concern for public health, or too concerned about community resources such as forests and lakes. Could such a veto be overridden? Probably not.

Vast regulatory authority rests with the EPA administrator. Already the impact of the Gorsuch policies can be seen: In 1982, for the first time, private industry spent less money cleaning up pollution than in the year before. Even Ruckelshaus is proposing to increase allowable levels of pollution, and the post-Ruckelshaus EPA of a second Reagan administration could easily move to relax ambient-air-quality standards, slack off on enforcement, and carry out the unfinished agenda that Anne Gorsuch left behind her.

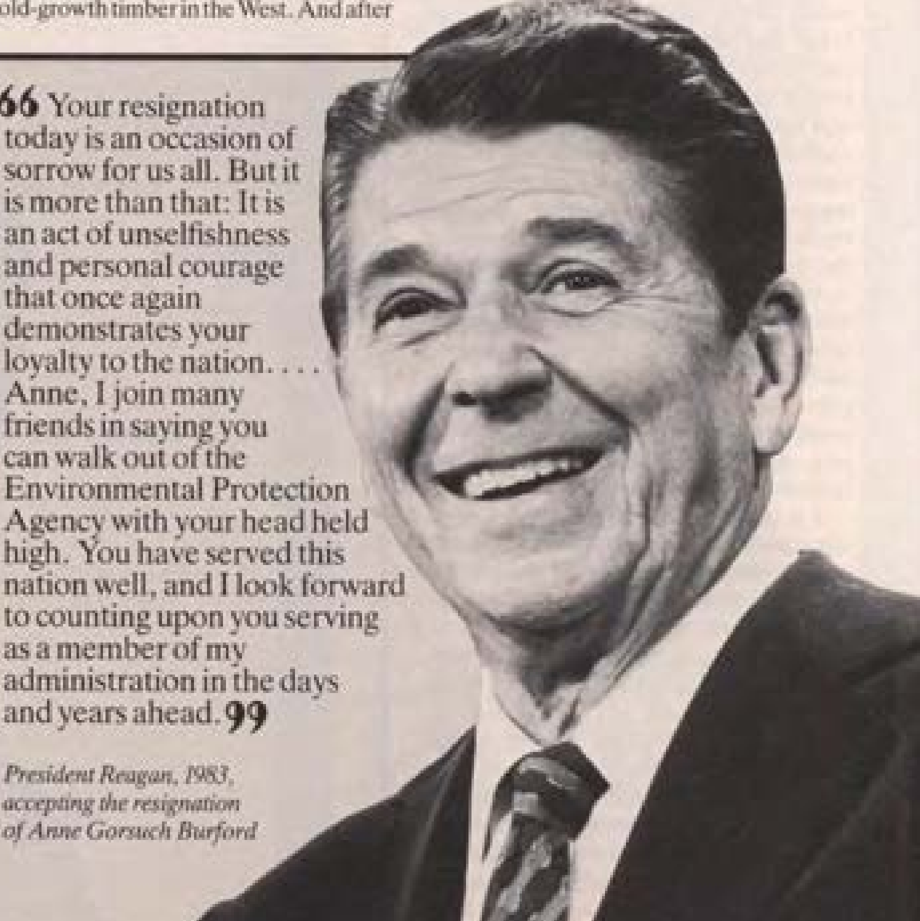
Reagan would probably have little more luck in a second term actually selling public lands than he had in his first, because Congress would most likely continue to block actual sales. But leases are a different matter. Between 1984 and 1988 a second Reagan administration would be able to overcome court challenges and congressional opposition and complete the leasing of the outer continental shelf. And a resumption of Watt's coal-leasing efforts could turn huge tracts in the West over to the energy monopolies, at bargain prices and with minimal environmental protection.

Leasing of our remaining old-growth timber in the national forests has been hurt in the first Reagan term by the slow pace of housing construction, legal obstacles left behind by RARE II, and depressed timber prices. But with four more years to work on it, Assistant Agriculture Secretary Crowell would have the chance to finish liquidating the old-growth timber in the West. And after four more years of Reagan-supported mining exploration and ORV races in the California desert, much of the nation's inventory of potential Bureau of Land Management wilderness simply will have ceased to exist.

Congress will resist many of these initiatives. The Republican Party and such relatively moderate administration figures as George Bush may try to temper the extremism, but these moderating influences have proven only marginally effective during Reagan's first term. They will be much weaker as Reagan seizes his last chance to nullify the threat of environmentalism.

For Reagan, ecological responsibility is the enemy; for environmentalists it is the first principle. A second Reagan administration—fully aware that the public wants more, not less, responsibility; fewer, not greater, public-health risks; higher, not lower, concern for community values; and greater, not less, generosity toward our grandchildren—will have one driving imperative: to take decisions about the American environment away from the public and continue the privatization of the American future. □

Carl Pope is the Sierra Club's Political Director and coauthor of the Sierra Club Book Hazardous Waste in America *(1982).*



President Reagan, 1983, accepting the resignation of Anne Gorsuch Burford

Wide World Photos

Here's what you need to know about bikes and their components before you go wheeling and dealing.

TIPS FROM A SPOKES PERSON

TED P. EUGENIS

JUST A CASUAL GLANCE will tell you that all bicycles aren't created equal. They have different sizes, shapes, accessories—and price tags. In fact, bikes range in cost from $89.99 to more than $2,000. Before buying a bike, therefore, you must ask yourself what you really want and what you really need. Those dazzling custom bikes that will fit you like the proverbial glove really aren't meant for most of us. Nor are special paint jobs, esoteric alloy components, or custom-mounted racks.

How then should you shop for a bike? First, write down what you will use it for: commuting, weekend rides around town, daily exercise rides, short (25- to 75-mile) weekend trips, or long-distance touring that will keep you on the road for weeks, months, or even years.

Second, ask yourself how much time you will actually spend on each of these bicycling activities. In other words, prioritize your needs.

Consider, too, who's going to maintain the bike and perform minor repairs—you or the bike shop? Next, figure out how much you can afford to spend on a bike and its accessories (such as racks, bags, a lock, water bottles, and spare parts).

There are other things to consider as well: where you'll park your bike at night, the condition of the roads on which you plan to do most of your biking, the climate you'll ride in, and the feel you're looking for—stiff and responsive like a sports car, or soft and easy like a big Chrysler.

There may be no such thing as the perfect multipurpose bike, but quite a few bikes will fit your bill of particulars without sacrificing overmuch in any one area.

Let's say you want a bike that will just get you to and from work every day. The city where you live is fairly flat, with a few short hills (half a mile or less). It has a mild climate, but rain is frequent. You also are considering doing occasional 20-mile-plus rides, but by and large you'll use the bike for commuting.

In this case, you'll do well to look very seriously at three-speed bikes. They're extremely dependable, cost less than $200, and require very little maintenance.

Three-speeds have been given short shrift by consumers and the media ever since the ten-speed rage locked America in its grip. Americans tend to view more (in this case, more speeds) as better. Europeans, many of whom have grown up in bicycle-oriented cultures, know the value of three- and even single-speed bikes for local riding.

Wider tires, upright handlebars, long frames that absorb road bounce, and three practical gear ratios make three-speeds very useful for most people. In addition, the low value most bicycle thieves place on three-speeds makes them ideal for locking outside your home or workplace.

THREE SPEEDS OR TEN?

HOW CAN A THREE-SPEED substitute for a bike that has ten or more? The first gear (speed) is similar to the low-ratio gear commonly found on ten-speeds; second gear is an all-around medium-ratio gear; and third is a medium-high high-end gear ratio. All you sacrifice in "speeds" are a few middle-range gears. Most people who own ten-speeds rarely use more than two or three gear ratios anyway.

Structurally, three-speeds have traditionally differed from ten-speeds by using heavier steel instead of alloys of steel and aluminum for handlebars, stems, seatposts, cranks, frames, and wheels. Some of the newer models, however, combine the practicality of a three-speed with the design and material advantages of ten-speeds. Aluminum-alloy wheels and steel-alloy cranks are the most notable features of the newer breed of three-speed.

Lastly, fenders are standard equipment on three-speeds, whereas most ten-speeds feature them as options. The obvious reason for fenders is to keep rain and road debris from putting an extra stripe in your suit as you pedal to work.

Despite the excellence of today's three-speed bikes, they are not as versatile as ten-speeds, which are lighter, stronger, and more efficient. Simply put, you'll need a ten-speed if you want to take rides for a weekend (or longer) over hilly terrain or in windy weather. You'll also want one for general touring or for exercise riding. What follows is a rundown on what to look for in the major components that make up a ten-speed.

The frame is the soul of a bicycle. To a large extent it determines the type of ride you'll get. You'll want to buy a bicycle with a frame that flexes or distorts the least when you apply power to the pedals. When a frame flexes, it reduces the amount of energy (supplied by your legs) that goes into powering the bike.

The quality of the frame is usually proportional to the price of the bike. For years, top-of-the-line frames have been made out of Reynolds 531 tubing, a steel alloy originally used in aircraft. Columbus, another high-quality tubing, is more commonly used in racing bikes because some frame-builders feel it's stiffer and gives a more responsive ride. There are other, more expensive and unusual frame alloys and composites, such as Reynolds 731, Columbus Superlight, and even graphite/steel-alloy composites, but their applications and cost aren't of concern to the average cyclist. Most medium-price bikes use what's commonly called chrome-moly, a good steel alloy that is not as stiff as and is less energy-efficient than high-price bike frames.

How the tubes of a frame are joined is also important. They can be welded together, or joined by lugs, which are fittings into which the frame tubing is inserted. The lugs and tubing are then brazed together to form a

solid union. Welding is faster and easier, and is used on most inexpensive frames. Brazed-lug frames are more expensive and stronger than welded frames. They also flex less, because their lugs and tubing are of higher-quality metal.

Once you've decided on the type of frame you want, the next thing to think about is its size. A frame's size is determined by measuring from the middle of the bottom bracket (see photo) to the top of the seat tube. Frames for unusually small people (17-inch frame) or unusually large ones (27-inch frame) are hard to find. The standard sizes in most manufacturers' lines are 19, 21, 22, 23, 24, and 25 inches.

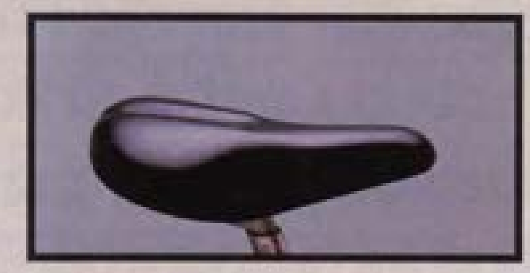
To determine which frame size fits you, straddle the top tube on a completely assembled bike in a bike store (don't sit in the saddle). If you have about an inch and a half between your crotch and the frame, that bike is about the right size.

You want the frame to fit that way for a number of reasons. First (and perhaps foremost), sudden stops or dismounting could force you to straddle the bike, and you'll be thankful for that bit of clearance. Second, you want a frame of the proper size so that you have the correct distance between your body and the handlebars. If a frame is too large or too small, your basic riding positions will never be comfortable, and you will not get the most power out of your peddling efforts.

Finally, a frame of the proper size allows you to maneuver the bike better than one that's too large. You'll also be able to shift gears and reach for your water bottle without taking your eyes off the road or shifting position dangerously. (This brings us to the cardinal sin committed by a lot of bicycle-owners: buying a frame that's too large. There's no reason for it, except perhaps the specious reasoning that bigger is better.)

As mentioned earlier, the frame is what determines the way a bike rides. The angle of the head tube—where the top and the down tubes meet—combined with the angle of the fork has the most impact on how the bike handles. Even though it appears to be stiff, the fork acts like a spring or a shock absorber: Forks can be built with a lot of curve for a soft and easy ride, or with hardly any angle at all for a stiff, responsive ride. Most ten-speed bikes costing less than $500 compromise between comfort and responsiveness, but the degree varies from manufacturer to manufacturer.

A second major factor in determining the quality of ride is the bike's wheelbase. It is measured from the dropouts in the fork (where the front axle fits) to the dropouts in



SADDLE

Leather costs more and seems harder, but it is preferable to the foam and synthetic used in most saddles.

LUGS

Brazed-lug frames are stronger—and more expensive—than welded frames. Braze-on cable guides are a further indication of quality.

DERAILLEURS

Designed to move the chain from one gear to another, derailleurs should operate smoothly and deliver fast, positive shifts. The components on more expensive units are made with alloys of steel, aluminum, and even titanium.

HANDLEBARS

Most ten-speeds come with what are called dropped handlebars, although straight bars are also available. The depth of the drop affects riding position and should be chosen based on personal preference and the intended use of the bike. Handlebars should be about as wide as your shoulders.

BRAKES

Each has its advocates, but side-pull, center-pull, and cantilever brakes work equally well if they are properly adjusted and maintained. Look for rubber hoods on the brake levers—they add extra comfort. Avoid extension levers for brakes—they encourage riders to apply the brakes from an awkward position and can lead to loss of control.

Top Tube

Head Set

Down Tube

Fork

WHEELS

Next to the frame, wheels are the most important part of a bike. If you have only a little extra money to spend, buy aluminum rims instead of steel. The aluminum rims are just as strong, but are much lighter. They're also easier to keep true, are less likely to dent, and provide better braking in wet weather. The average cyclist should buy wide rims and "clincher" tires made for touring; ultra-slim rims and tubular "sew-up" tires are meant for racers. Clinchers are durable, relatively inexpensive, and easy to repair.

FRAME

Of all a bike's components, the frame most determines the quality of the ride. If the wheelbase is long—say, 41 inches—the frame is meant for touring. It will have more stable steering and will provide a smoother ride. The wheelbase on racing frames typically measures 39 inches. These shorter frames will be stiffer and more responsive than their larger cousins. Other frame dimensions are important as well: The longer the chainstays are, the more stable the bike will be with a touring load, while the length of the top and seat tubes affects the way the bike fits its rider's leg, arm, and torso lengths. Shorter riders should pay special attention to the length of the top tube. A note to women: Mixte frames (those with a dropped top tube) are substantially weaker than standard frames.

DRIVE TRAIN

Consisting of pedals, a crankset (the crank arms and axle), chain wheels, and chain, the drive train transmits leg power to the rear wheel. Most ten-speeds have light, strong, aluminium-alloy cranksets. For best results, buy a cotterless crank that will allow you to change chainwheels if you desire. Of the three types of pedals—counterweighted, rat-trap, and quill—counterweighted are considered the least desirable. Rat-trap pedals are suitable for use with everyday shoes and tennies. Quill pedals fitted with toe clips and straps increase pedaling efficiency.

Photos by Bob Aude; bicycles courtesy of David Guettler, Bianchi of San Francisco

the seat and chain stays (where the rear axle fits). The longer the wheelbase, the more the frame tends to flex and absorb road shocks. A short wheelbase lets you feel almost every bump in the road.

A final word about frames: If you simply can't decide between one frame and another based on "feel," look to the little extras that some manufacturers add to their frames. Generically called braze-ons, they are mounting devices built onto the frame for shift levers, brakes, water-bottle cages, and carrying racks. Although nonessential, braze-ons add a sense of security. On shift levers, for example, two threaded bumps protrude from the frame's down tube. The shift levers slide over the fittings and fasten tightly with a screw or bolt.

PEDALS, CRANKS, AND COGS

IF THE FRAME is a bike's soul, the drive train is its heart. Composed of a crank, chainwheels, pedals, chain, derailleurs, and freewheel, the drive train is your bike's way of transmitting power to the wheels.

A bike's crank arms, chainwheels and pedals are attached to an axle, which in turn is secured to the threaded bottom bracket where the down tube and seat tube join. The different sizes and types of axles all serve one purpose: to link the rotating crank arms so power can be applied. Not surprisingly, quality is proportional to price.

On the low end of the scale, the axle and both crank arms are all one piece. This type of crankset (axle plus crank arms) is called an Ashtabula crank, because it was originally made by a company in Ashtabula, Ohio. Used most often on bikes that cost less than $100, one-piece cranks have also come into vogue on less-expensive all-terrain (or mountain) bikes. As its name implies, the Ashtabula crank is practical and durable.

Some cranksets use a cotter pin to secure the crank arms to the axle. Because these cottered cranks are lighter and stronger than Ashtabula cranks, they are considered to be more energy-efficient. Cottered cranks are the next step up from an Ashtabula setup. They are commonly used on three-speeds and on ten-speeds costing less than $170. Their simple design makes for easy repair: Pins do wear out after years of use or from bad riding habits that put unnecessary pressure on the axle/cranks.

Lastly, there is the cotterless crank. Instead of using a pin to hold the crank arm on the axle, the crank arm is secured by bolting it to the threaded axle. Cotterless cranks, usually found on bikes costing more than $170, are considered to be of higher quality than cottered and Ashtabula cranks.

As with frames, different types of steel, steel alloys, and other composite materials are used to make axle/crank combinations. Ashtabula cranks, made entirely of steel, are quite heavy. Most cottered cranksets are also all-steel, but they generally weigh less than Ashtabula cranks. Cotterless cranks are typically steel alloy or a similar light but strong metal. Ashtabula and cottered cranks are great for commuting and around-town use. For touring, cotterless cranks offer more security. But they all can and will break down if they aren't maintained or used properly.

Attached to the right crank arm are chainwheels, the large gearlike wheels on which the chain rides. They are usually made of the same materials as the cranks they fit. Their size, in conjunction with the bike's rear gears, determines the ratio of the gears.

On cheaper cranksets (one-piece, cottered, and low-end cotterless), chainwheels are permanently attached to the crankarm and cannot be changed. Generally, the better the crankset, the wider the selection of chainwheels.

The chainwheels transfer leg power to the chain, which in turn drives the freewheel attached to the rear hub. On a ten-speed bike the freewheel is actually five miniature chainwheels (of different sizes) called "cogs." The ratio between the front chainwheel and a cog determines the gear ratio.

A large gear, one you might use on a flat road with a tailwind at your back, would be 100 inches. One revolution of the crankset in that gear would propel a bicycle the same distance as one revolution of a direct-drive bicycle with a 100-inch-diameter wheel. A small gear, one you would use to go up a steep hill, would be about 24 inches.

Ten-speed bikes come equipped with chainwheels and freewheel combinations of different sizes, to give you a wide variety of gear ratios. Many good-quality bicycles designed for beginning and intermediate cyclists have a gearing range of 39 to 100 inches. Remember that the lower the gear, the easier it is to spin, but it also won't propel you as far as a larger gear.

Because there are two chainwheels on the crankset and five cogs in the rear, chain alignment can be a problem. The chain must move from one sprocket (chainwheel) to the next, or from one cog to another. That's where derailleurs come into play. Derailleurs are operated by shift levers located on the down tube, stem, or handlebar ends. (No one location is inherently better than another, so let personal preference rule here.) Shifting the levers causes the derailleur (and the chain that's threaded through it) to move sideways. The smoother the shifting action and the lighter the weight, the more expensive the derailleur will be.

Sprockets, cogs, and derailleurs enable you to vary the gear ratios on your ten-speed bike as you ride. But don't let the term "ten-speed" fool you. Using the outer chainwheel with the large cog closest to the rear wheel puts the chain at an angle that causes too much stress on the drive train. That combination should not be used, eliminating one gear ratio.

Using the inner chainwheel with the small cog farthest away from the rear wheel puts similar strain on the drive system. This eliminates another gear ratio, bringing those vaunted ten speeds down to eight.

Without consulting a gear chart, which details gear ratios in different chainwheel/cog combinations, it's safe to say that most ten-speeds have only six or seven usable gear ratios. If gear ratios aren't actually duplicated, they come close enough that differences between them are not significant. That's why some manufacturers have added a sixth cog to the freewheel and are marketing their bikes as twelve-speeds.

HUBS, RIMS, AND TIRES

WHEELS ARE THE LAST LINK in the drive train. They transmit the energy you expend to the road's surface. At the center is the hub, which joins each wheel to the frame and its spokes to the rim. Because wheels support the bike and rider, a strong wheel that stays true—without wobbles and blips—is important.

The casing of the hub can be made of steel or steel alloys. As with frames and cranks, the quality varies widely. A good hub, when adjusted properly, will turn smoothly on its bearings. (The bearings and the axle together comprise the center of the hub.) The ends of the axles are secured to the bike frame by large nuts and washers, or by a lever-locking device called a "quick release" (because no tools are needed to fasten or unfasten the wheel). Quick-release hubs make fixing flats and loading the bike into a car easier. Unfortunately, they also make things easier for bike thieves. You must either get a cable long enough to secure both wheels, or detach the front wheel and lock it to the frame and back wheel.

Hubs also come with large or small flanges. The flange is the part that houses the bearings and to which the spokes are attached. Large-flange hubs give the wheel a stiffer, more responsive feel. Small-flange hubs soften road shock, and are used on bikes where this is a desirable quality. The size of a flange has nothing to do with its quality but it does contribute to the overall feel of the ride.

There are usually 36 spokes connecting

the wheel rim to the hub. On most bikes the spokes are "laced" on the wheel using a three-cross or four-cross arrangement. The three-cross method produces a stiffer wheel, the four-cross a softer feel. Neither the number of spokes nor the lacing method indicates a wheel's quality.

The differences between wheels on an expensive bike and those on a cheaper one can be found in the smoothness of the hubs, the lightness and strength of the rims, the tension of the spokes, and the total weight and strength of wheel and tire combined.

Tires, of course, complete the wheel. A tire's size, pressure, type of tread, and weight affect the way the wheel rolls. The main reason for buying an expensive bike is that it's easier (and therefore more enjoyable) to pedal. For this reason bike manufacturers equip high-priced bikes with thin-profile, high-pressure tires.

For example, three-speeds use wheels and tires that are heavier, shorter, and wider than a ten-speed's wheels. The tires hold about 50 pounds of pressure. Bikes ranging in cost from $150 to $400 have tires that hold about 75 to 95 pounds of pressure. Expensive ten-speeds—those priced at $500 and more—often have a different type of wheel and tire, called sew-ups. The tire completely encases the tube and is then glued to a special rim. The name comes from the fact that to repair a flat, you must cut the casing and extract and patch the tube, then sew the tube back into the tire. Good sew-up tires can be inflated to between 115 and 150 pounds.

Wheels support you and make the bike go 'round. Most dealers will check over a new bike and make sure that the spokes are tensioned properly. They'll also recheck and readjust wheels (for a nominal fee) after you ride a new bike for a couple of weeks. Invest in a good pump, too, and use it to keep your tires up to their recommended pressure.

GETTING A GOOD BRAKE

MATTER IN MOTION remains in motion until an outside force interrupts its kinetic energy. Brakes do just that on bikes.

Brakes are activated by applying pressure to levers mounted on the handlebars. Each lever pulls a cable attached to the brake's arms, which in turn press rubber brake pads against the rim. Your front brake does 70 percent of the work in stopping a bike.

The smoothness of this operation, how quickly the bike responds to braking action, and the ease of adjustment and repair are generally better on more expensive bikes. Good brakes will feel secure and smooth, with little or no slop. Less-effective brakes will feel mushy and can grab at the rim.

There are three types of brakes to choose from. Brakes with a cable attached to the side of the brake arms (side-pull brakes) are considered to be the best. A case can be made, however, that cantilever brakes have a faster, surer braking power, which is why they are preferred by riders of touring and mountain bikes. Finally, those who advocate center-pull brakes cite the merits of that design's self-centering cable arrangement.

Side-pull brakes and cantilevers, a type of center-pull brake, have emerged as the two types of brakes you can expect to find on almost any bike. Center-pull brakes have fallen from grace because improved, inexpensive side-pull brakes have won over both consumers and dealers.

Like all components on a bike, brakes can be made of steel or steel alloys. Steel alloys tend to have a stiffer, more responsive feel.

KEEPING COMFORTABLE

HAVING AN EFFICIENT and expensive bike won't do you a bit of good if it's uncomfortable. Hands, shoulders, and the all-knowing posterior take the brunt of road shock. A well-proportioned bike and a good saddle make all the difference in the world.

We've already discussed how to fit a frame. Saddles also have to feel right, and not just in the dealer's showroom. An all-leather seat is a good indicator of a bike's value. Although it will look and feel hard when new, a leather saddle will mold itself to its owner as it breaks in. In fact, many people keep their saddle when they sell a bike.

Because of high leather prices, all-leather saddles are, in many cases, being replaced by cheaper saddles made of foam and/or plastic covered by synthetic materials. These mushy, unsupportive seats may feel good in the showroom, but they won't after a long ride.

The type of handlebar you want is a matter of personal preference. Most ten-speeds come equipped with handlebars that have a curve (drop) in them so riders can assume an aerodynamic position. They also allow you to place your hands in four basic riding positions. You can choose from deep or shallow drops and wide or narrow handlebars. If you don't like the idea of hunching over to ride, ask your dealer to put one of five different styles of upright bars on your bike, like those on most three- and single-speed bikes.

Now that you know what to look for, here's an idea of what you'll probably get in three different price ranges: inexpensive (less than $200), medium price ($200-$450) and expensive (more than $450).

You can still buy a two-wheeler for less than $100, but quality is definitely proportional to price. Ten-speeds in this range will have cheap components, stamped dropouts, and poor-quality frames. If you plan to pay less than $100, look to one- and three-speed bikes. They will be better-made and represent a better buy. Spend about $50 more and you can get an excellent three- or single-speed bike or a decent ten-speed utility bike with short tour possibilities. At $150 a ten-speed will have a steel frame, steel bolt-on wheels, and cheap cranks, brakes, and derailleurs. For this price, a three-speed or single-gear bike is still a better buy than a ten-speed.

At the high end of the inexpensive range, a ten-speed will have a slightly better-built frame, some steel-alloy components, and better overall quality control. Such a bike will be excellent for commuting and utility use with short tour possibilities.

Bikes in the $200-$450 price range make more extensive use of steel alloys in wheels and components, use higher-grade frame materials, and exhibit better workmanship. Drive trains—cranks, chains, derailleurs, and freewheel—are routinely of good quality. Alloy handlebars and stems (instead of steel) become *de rigeur* in and above this price range. Chrome-moly tubing replaces steel in frames. As the price climbs through the range, higher-quality brakes, cranksets, and pedals are used, and at the very top of the medium-price range some top-of-the-line components are included along with other high-quality components.

What kind of bike do you get for more than $450? Reynolds 531 and Columbus tubing appear in some manufacturers' frames. High-quality lugs and construction are the rule. Spending more money in this top end of the market brings a more refined appearance, top-of-the-line components, and a better frame. The quality of the bikes gets better and better the more you spend, although in increments that are probably too subtle for most of us to recognize.

It's important to remember that there's no perfect bike for all occasions. Many people have a cheap one-speed bike for commuting, and a touring bike for longer trips. More than likely, though, the average bicyclist owns just one bike, and uses it for all cycling activities.

If you think you have to spend too much money on a bicycle, total up how much you've spent on gas during the past year to drive to places less than five miles from your home. That wasted money could have bought you a nice bike, and you'd be burning fat instead of fuel. □

Ted P. Eugenis, former equipment editor for Backpacker *magazine, now freelances from his home in Bend, Ore.*

All The Fire, Fury And Passion Of Beethoven Is Yours To Audition FREE FOR 10 DAYS

THE COMPLETE SET OF NINE BEETHOVEN SYMPHONIES ONLY $9.98

It's your introduction to The International Preview Society—the classical music club with NO OBLIGATION TO BUY.

No Obligation To Buy Future Offerings

This remarkable $9.98 offer is our way of introducing you to an outstanding music club with never any obligation to buy. You'll have the opportunity to select exciting single or multi-record/cassette collections approximately every four weeks in our exclusive Preview Magazine. Each issue highlights a Main Selection...plus an impressive array of alternate selections (most available on cassettes).

You Choose Only The Music You Want

If you'd like to preview the Main Selection, you need do nothing. We'll send it automatically. But if you'd prefer an alternate selection or none at all, just mail back the Preview Notification Card—enclosed with the magazine—by the specified date. You'll always have at least 10 days to decide whether you want to exercise your free preview privileges. Should you ever have less than 10 days, you will receive full credit for returned merchandise.

Regular Savings To 35% Off List Prices

As a Society member, you always enjoy up to 35% off suggested retail prices on all multi-record sets. Plus, our Half-Price Bonus Plan means that for every regular member purchase you make, you may choose a Bonus album for only half of the members' already-low club price! That amounts to savings of more than 55%! A postage and handling charge (plus applicable sales tax) is added to all shipments.

FREE 10-Day Audition Privileges

You'll always have 10 days to preview a selection at home—absolutely free. And remember, unlike most other record clubs, there's never any obligation to buy.

Highest Quality Recordings

All selections are on RCA, Deutsche Grammophon, London, and Philips—the world-renowned labels most respected by music lovers and performers alike.

I can't think of a more economical way to build a fine classical recording library today than through The International Preview Society. And what better way to begin than with these superior performances of the Beethoven Symphonies by Karl Böhm and the Vienna Philharmonic Orchestra. —**Martin Bookspan,** noted music critic and contributing editor to **The International Preview Society.**

Mail Today! Send No Money Now!

FREE HOME AUDITION REQUEST

The International Preview Society
P.O. Box 91406 • Indianapolis, IN 46291

YES! Please send me, for my free audition, the "Beethoven—Nine Symphonies" set, and my bonus album to keep, free and without obligation. I may return "Beethoven—Nine Symphonies" after 10 days and owe nothing . . . or keep it for only $9.98 plus a postage/handling charge (sales tax where applicable). I will also receive, approximately every four weeks, free preview privileges of the finest classical recordings. Of course, I may cancel at any time.

Please send all selections on:
☐ **LPs** (R05040/R05156) ☐ **Cassettes** (C05040/C05156)

FREE BONUS
Your free gift—just for returning the attached coupon within 10 days—BEETHOVEN'S VIOLIN CONCERTO, performed by Christian Ferras and the Berlin Philharmonic Orchestra, conducted by Herbert von Karajan.

Name

Address Apt. No.

City State Zip

Telephone No. (Area Code)

Have you bought anything else by mail in: ☐ **last 6 months** ☐ **year** ☐ **never**

Only new members eligible. Offer limited to the connecting 48 states. Limit one membership per household. NOTE: All applications are subject to review, and we reserve the right to require additional information or reject any application.

PC P-KU

MUSIC AS NATURE'S VOICE

INGRAM MARSHALL

THE COMPOSERS who appeared at the end of the 19th century represent the apotheosis in music of the kinship between Nature and Art. One thinks of Gustav Mahler (his Third and Fifth symphonies); of Richard Strauss (the *Alpine* Symphony); of Anton Bruckner (his lofty, craggy symphonies); of Edvard Grieg (his Norwegian landscape in music); of Debussy (*La Mer*, his portrait of the sea); of the Czech, Bedřich Smetana (the *Vltava* section—known to us as "The Moldau"—of his epic symphonic poem, *Ma Vlast* [*My Country*]); and of Jean Sibelius (his vast, lonely Northern landscapes). But the alliance between the composer and the natural world extends back into the 18th century—when the Western world was renewing its interest in nature—and forward to the present day, well beyond Schoenberg to composers such as Charles Ives, Olivier Messaien, John Cage, and John Adams.

I live not in myself, but I become
Portion of that around me; and to me,
High mountains are a feeling . . .

Then stirs the feeling infinite, so felt
In solitude, when we are least alone,
A truth, which through our being there doth melt
And purify from self: it is a tone,
The sound and source of music . . .

From *Childe Harold's Pilgrimage*, Lord Byron

The interaction between the musical creator and nature ranges from a very real involvement in the stuff of nature—imagine Mahler climbing around the Alps and composing in a hut overlooking a lake—to a more idealized, literary conception. Haydn and Strauss, both of whom hated to go outdoors, come to mind in this latter regard. Baroque and classical composers, unlike their romantic successors, viewed nature from a safe distance. The change of the seasons was a popular subject; pastoral and hunt scenes were used as dramatic devices in their operas and oratorios. But in the music of these periods the wild, natural world is seen allegorically; there is respect, as it were, but not love.

In the late 18th century, artists began to place a higher value on natural things. By the 19th century, Mendelssohn or Wagner could, after experiencing the fury of a storm at sea, write music about the terrible beauty of the event. (A composer in an earlier era would have written a hymn of thanksgiving to the Almighty for having escaped.)

Central to the Romantic movement—and I speak here of poetry and painting as well as music—was a preoccupation with nature. Artists in an earlier age, contemporaries of Descartes and Newton, respected nature but thought they could perfect it or at least better it. They wanted to compartmentalize all things: not just flora and fauna, but human emotions as well. The Romantics accepted the mysterious and were fascinated by the unclassifiable. They went toward nature and embraced it for its own sake.

Ludwig van Beethoven was the first composer to really "go into" nature. Like many another urban dweller, he liked to get away from the big city—in his case, Vienna—to spend time in the

countryside. That his outings were a source of great joy for him is documented by his letters. In 1810 he wrote:

How delighted I shall be to ramble for a while through bushes, woods, under trees, through grass and around rocks. No one can love the country as much as I do. For surely woods, trees, and rocks produce the echo which man desires to hear.

Beethoven passed many of his summers in the Viennese suburb of Heiligenstadt—and it was there, in 1806, that he composed his most conspicuous poem to nature, the *Pastoral* Symphony (No. 6 in F major). Like many a modern urbanite, Beethoven worked hard most of the year in cramped, noisy surroundings. Arrival in the countryside for a respite from city woes must have brought on feelings of great joy, a kind of high. Indeed, the opening movement of the Sixth Symphony is titled "Awakening of Cheerful Feelings Upon Arrival in the Country."

Usually, when we arrive at our country place for a rest or vacation, we experience a slowing down, an unwinding. Appropriately, that idea is reflected in this movement, with its fast tempo but remarkably slow harmonic rhythm. Melodic patterns run to the static, and chords go unchanged for measures. The feeling is lively but spaciously relaxed at the same time.

In the second movement, "Scene by the Brook," with its rippling 6/8 rhythms, the placidity of a meadow stream is conjured. We see not only the brook itself but its neighbors: the field and woods through which it runs, the grass and grazing animals on its banks, and the fish within.

After a third movement—a dancelike "Jolly Gathering of Countryfolk"—the fourth movement breaks out in the form of a "Thunderstorm." Beethoven's musical depiction of a tempest would not be equaled for some 40 years; then it was only by Hector Berlioz in his opera *Les Troyens* (*The Trojans*). Berlioz was so impressed by Beethoven's storm that he compared it to a "universal deluge, the end of the world":

Listen to those gusts of wind, laden with rain; those sepulchral groanings of the basses; those shrill whistles of the piccolos which announce that a fearful tempest is about to burst. . . .

In the last movement of the *Pastoral*, a "Shepherd's Song of Thanksgiving," the choralelike theme that emerges, reflecting the tranquility and thanksgiving mood of the storm's aftermath, is derived from a faster melody out of the storm music itself. Thus is evoked, musically, the union of opposites that reverberates in nature. This formal, allegorical balancing act reflects Beethoven's pantheistic, harmonious view of nature.

TURNING FROM THE celebrated *Pastoral* to a lesser-known work by Beethoven, the cantata *Meeresstille und glückliche Fahrt*, we find a little gem of a work truly inspired by nature. In the first part of this setting of two poems by Goethe, the literalness of the scene is portrayed uncannily. The music perfectly expresses the absolute, dead calm of a still, waveless sea. The horrible beauty of a ship becalmed on a mirrorlike, endless expanse of ocean is captured by Beethoven's use of strangely "modern" devices: an almost complete suspension of rhythmic movement, utterly *pianissimo* dynamics—except for a few key words, when the upswell of the chorus is remarkable in its effect—and minimal melodic and harmonic change.

Goethe may be considered poet laureate for the entire romantic era of music. Although Goethe was not a full-blown romantic himself, many of his poems deal with nature in a direct, personal way, and he is generally acknowledged as the source of the romantic ideal of humanity's spiritual alliance with nature. Robert Bly, the contemporary American poet, in his anthology *News of the Universe*, says that Goethe

sees a consciousness in nature, and he doesn't dismiss it as the intuition of an untutored mind. He goes toward it. Then he takes the next step, which is understanding that all consciousness has a dangerous side, and that if there is a consciousness in nature it too has a dangerous side.

One of Goethe's ballads, *Der Erlkönig* ("The Erl-king"), is about that dangerous side of nature's consciousness. Franz Schubert, Beethoven's younger contemporary in Vienna, set it to music, and it is one of his best-known compositions.

In *Der Erlkönig* there is a three-way conflict. A man, traveling through the woods on a stormy night, is carrying his small son. The boy "sees" an Erl-king who tries to lure him away with promises of all sorts. The boy repeatedly tells his father what is happening, but the adult, who cannot "see," reassures him with words like "It's a patch of fog" or "The wind is rustling through the leaves." The father, by not seeing, fails to save his son, who is dead in his arms when they arrive in the morning. To me the moral is clear: The dangerous side of nature can be deadly when unrecognized.

This, one of Schubert's earliest songs—he was 18 when he wrote it—is a tour de force. A galloping triplet figure in the accompaniment maintains the sense of both journey and danger. The vocal part perfectly represents all three personages in succession: the alluring tones of the tempter Erl-king, the mounting fears of the child (here Schubert uses blatant dissonances to good effect), and the calming but ineffective words of the father. While the poem is allegorical, which is to say not exactly about nature itself, it is so evocative of nature's dark side that it certainly tells us something about both Schubert's and Goethe's attitudes toward nature.

In a later song, *Die Forelle* ("The Trout"), Schubert's depiction of a scene from nature is straightforward. This song was used as the basis for his Quintet in A, commonly known as the "Trout" Quintet. Schubert, like Beethoven, enjoyed the countryside, and in the summer of 1819 he lived in the village of Steyr in upper Austria. He described the surrounding countryside as "indescribably lovely," and the calming effects of such pastoral loveliness is heard in the alluring, convivial music of the quintet.

The first movement begins with a 26-bar introduction, usually described as a "birth-giving" process leading to the first theme. But I think it can also be heard as a meditative, tentative image of a stream's beginning, as it slowly meanders through a meadow not far from its source. When the movement proper gets going, one can easily envision a swiftly flowing brook in full freshet.

In early October 1828, despite a debilitating illness, Schubert went on a three-day walking tour of mountainous lower Austria. Immediately upon his return to Vienna he composed *Den Hirt als die Fels* ("The Shepherd on the Rock"), a pastoral about a shepherd overlooking a lovely, autumnal landscape. Schubert died in November, and this piece is his musical farewell. The lilting, somber tones of a clarinet evoke the loneliness of a shepherd's vigil on a hillock overlooking a deep, dark valley. A touch of local musical color is added with a line that is distinctly yodellike on the words "und singe." There is an overall triste, autumnal quality to this song, even if it does recoup in an optimistically gay, and typically Schubertian, manner at the end with the shepherd's anticipation of the coming spring, a season Schubert would not see again.

If Beethoven and Schubert relied somewhat on allegory and pastoral conventions for their musical essays into nature, the Frenchman Hector Berlioz was a full-blown Nature-Romantic. Berlioz was a spiritual descendant of Jean-Jacques Rousseau,

Museum Folkwang Essen, with special assistance from Hans Hinrichs Peach

Landschaft mit Regenbogen (Landscape With Rainbow) *by the early 19th-century German artist Caspar David Friedrich.*

who inspired the "back-to-nature" philosophy of the 18th century. If the German Romantics brought this "craze" to its first creative flowering, it was Rousseau's countryman, Berlioz, who embodied the heroic artist aspiring to the loftiness of the Alps themselves without aid of shepherds or allegories.

Berlioz was born near Grenoble. He spent much of his childhood in and around the Isère Valley in the magnificent shadow of the Alps. Even though he lived most of his mature life in Paris, he always maintained that the mountains were his spiritual home. He once said to Franz Liszt that it was too overwhelming to actually be in the mountains . . . they exerted too strong a grip on him. He said he'd rather imagine their power and grandeur in his mind's eye, from a distance. For his vacations he preferred the sea.

Much of Berlioz's inspiration in the natural realm came from poets. He admired Byron, and it was the English poet's popular *Childe Harold's Pilgrimage* that provided Berlioz with a program, albeit a loose one, for his symphony *Harold in Italy*. This work has a soloistic viola *obbligato* running throughout—though it's not quite a concerto—which represents the melancholic, wandering Harold. The piece was written in 1834, soon after Berlioz had returned from a stay in Italy—where he had spent a lot of time wandering about the countryside, especially in the wilder parts of the Abruzzi mountains. He frequently walked for days with nothing but his guitar and a hunting gun.

It is not stretching a point to see this music as autobiographical. In the first movement the imagery seems to be of Harold wandering through the mountains, first in a gloomy disposition—darkly painted in D minor by low strings and bassoons—and then in a brighter mood. It could easily be Berlioz himself on one of his peregrinations among the mountains. A bucolic, pastoral scene with peasant types is the idea behind the third movement ("Serenade of an Abruzzi Mountaineer to his Sweetheart"). The composer spent much time in some of the mountain villages and may have notated, or remembered, a tune or two that creep in here.

Standing at the end of the Romantic age is Gustav Mahler, who wanted to embrace all things in his music and did so quite successfully. No composer has ever found so much solace and resource in nature. He lived much of his life in Vienna, a city greatly changed from Beethoven's day. One had to travel farther to find the country, but travel was easier too. Mahler spent many of his summers in the mountains—first at Steinbach am Attersee in the Salzkammergut, and then later at a house he built at Maiernigg on the Wörthersee in Carinthia. Summers were valuable composing time, but he took as much time as he could for hiking and wandering about the countryside.

It seems as if all Mahler's music is imbued with the idea of nature, from his earliest works, such as *Das Klagende Lied* ("The Plaintive Song"), to his last, *Das Lied von der Erde* ("Song of the Earth"). Few composers have confessed as much indebtedness to nature. Of all Mahler's symphonies, perhaps the one most endowed with the idea of nature is the Third. In the summer of 1896, when Mahler was hard at work on this opus, the young conductor Bruno Walter—later to become one of the great Mahler interpreters—came to visit him at Steinbach. Immediately upon his arrival, he noticed the imposing walls of the Höllengebirge looming behind the village. "You needn't look," announced Mahler. "I have composed all this already."

Clearly, Mahler believed that through his music he and nature were one. His awareness of nature was intense. It ranged from the lovely and pastoral to the threatening and grotesque. "Most people, when they speak of nature," he wrote, "think only of flowers, little birds, and woodsy smells. No one knows the God Dionysus, the great Pan."

It is Pan awakening that Mahler tries to portray in the first movement of the Third Symphony, called "Summer Marches In." The entire movement is a march, and the forward thrust of summer's alarmingly fast arrival, especially in the Alps, is conveyed by that urgent musical form. Mahler wrote of it:

> *In the first movement, the southern storm blows mildly, as it has done here the last few days. . . . In march tempo, the*

movement never stops advancing; as it approaches it becomes louder and louder, gathers strength and grows like an avalanche until its din breaks above our heads in powerful rejoicing.

Mahler seems to have perceived a kind of trinity wherein his person, his music, and nature were all interconnected. He says at one point, "The life of summer filled me to the point at which I became conscious of it as a person and thought that I could see its body and face." If he saw nature personified, he also saw his music as part of nature. Of the movement's opening he wrote:

It is hardly music anymore, just the voice of nature; one shudders at this motionless, soulless material (I could have called this movement 'What the Rocks Tell Me') from which, little by little, life frees itself.

Indeed, there is in the opening of this movement a static, motionless feeling punctuated by trumpet calls of unsettling dissonance. Nature awakes in the guise of a violin solo in a contrasting major key: a meadow full of lupine and singing birds. Throughout the movement he alternates, wildly, between contrasting ideas. Despite its abrupt, unprepared changes, its length and modernity, this is a quite simple march that reflects the triumphant, inevitable entry of summer into the Austrian Alps.

In the second movement ("What the Flowers Tell Me") we find an idyll, a real pastorale. But as the symphony progresses—there are five movements—it becomes less descriptive and more spiritual in tone. The last movement is called "What Love Tells Me." It is preceded by a boys' choir—"What the Angels Tell Me." This is sublime music; few who have heard it have failed to be moved. But it must be seen in the light of what went before, the musical commentary on the all-encompassing Pan-holiness in nature. Humanity is a part of this, not just an observer. Mahler sees humanity not as something superior to nature, or even at odds with it, as did Liszt: He sees humanity as an integral part of nature.

When the young Arnold Schoenberg heard Mahler's Fifth Symphony in 1903, he declared in a letter to the older composer: "I speak to you not as a musician, but a man. . . . You have bared your soul . . . and in it I see wild and secret country . . . sunlit, smiling meadows." These were not fanciful words, for, as Schoenberg knew, Mahler was a composer for whom nature was more than an inspiration; it was a primal force.

Ironically, it was Schoenberg who helped lead modern music into a brave new world that eschewed romantic sentiment and rhetoric. Much of 20th-century music, with its emphasis on structure and formal purity, has found little in nature to emulate. Of course, *fin de siècle* Europe was a mixed bag. Along with the emergence of Modernism, nationalist schools of music were quite popular, with their conservative, romantic styles. One finds a great deal of nature consciousness in, for example, the Czech, Bedřich Smetana; the Norwegian, Edvard Grieg; the Russian, Mussorgsky; and, a bit later, the Englishman, Ralph Vaughn Williams (of whom it's been said, unkindly, that his music's rural, pastoral qualities get a bit boring after a while—"like looking at a cow staring over a fence for an hour").

Standing at the crossroads of the turn of the century are two "nationalist" composers (the epithet only partially applies to them) whom we cannot leave out: Claude Debussy and Jean Sibelius. We need hardly comment on the Frenchman's great orchestral essay on the sea, *La Mer*; it is probably the best-known nature tone poem. According to Debussy, it was truly inspired by his obsession for the sea. Actually, he wasn't near the ocean at all when he conceived and wrote most of it; he was in Burgundy. He wrote to a friend:

You tell me that the ocean doesn't exactly wash up on the Burgundian hills! Perhaps this situation resembles landscapes painted in studios, but I have innumerable memories; it seems to me that the charm of the real place weighs too heavily upon our imagination.

He did, in fact, complete *La Mer* in Dieppe and Jersey. The point is, however, that the music isn't exactly a literal tone painting of the sea itself, but has more to do with the composer's perception of it in all its fantastic and mythic charm. It has been suggested by several critics that Debussy's musical intelligence, his way of working with sound in nonlinear, parallel forms, has an analogy in the ocean itself—waves and troughs with much motion on the surface, but underneath, a calm movement of the slowest kind. Indeed, in Debussy we have one of the first modern composers to slow music down in a way, to build a kind of static activity out of harmonic and melodic movement that stands outside traditional gravitational laws of harmony and voice-leading. Probably the best place to hear this is in the second movement, "Jeux des Vagues" ("Play of the Waves").

With Sibelius, a composer of completely different temperament than but contemporary with Debussy, we have another strong example of nature's role as both model and source of inspiration. In his last major work for orchestra, *Tapiola*, written in 1926, Sibelius penned one of the masterpieces of nature-descriptive music. Tapio is the ancient Finnish god of the forest, and this music is about the spirit of the endless Finnish woods and all the variety and mystery they contain.

Tapiola is remarkable for its monothematic form. It is a constant working and reworking, an evolutionary development, of a simple three-note theme. While the orchestral colors and the effects Sibelius conjures up represent a kind of supernatural, spooky forest scene (it's surprising Disney didn't use this in *Fantasia*), there is something deeper in the music that connects it to the forest primeval. The English critic Ernest Newman asserts, rightfully I think, that the one-themed structure is an attempt to represent the infinite variety of life in the forest, all of which springs from a common source.

THERE IS MUCH TALK nowadays about "neoromanticism" in music. While I am skeptical of stylistic comparisons between some younger "lyrical" composers and their 19th-century counterparts, there is one connection that seems valid, and that has to do with nature. The ecological-awareness movement of the 1960s and 1970s was a bit like the early Romantic push toward nature as an entity valuable in itself. The growing realization of the interconnectedness of natural things has affected all levels of society, not least artists, poets, and musicians.

So-called "minimalists" such as Steve Reich, John Adams, and Phil Glass have written works wherein nature takes no backseat. Reich's *Vermont Counterpoint* for 11 flutes (the ultimate "pastoral" instrument), Adams's *Light Over Water* (a synthesizer-and-brass piece for dancer Lucinda Childs that evokes mists, clouds, and the changing light over the Pacific Ocean and Santa Cruz Mountains), and Glass' *Koyaanisqatsi* (powerful music for a film that contrasts the purity and sanctity of desert wilderness against maddening, urban busyness) all demonstrate a "Romantic" kinship with nature. As many composers turn away from the expressionless face of Modernism with its "belief" in technology, they seek new, directly expressive styles, even if in their pursuit they use that same technology they no longer trust. This dichotomy is perhaps a primary element in art today. □

Ingram Marshall is a San Francisco-based composer known for his live electronic compositions and his electronically processed ensemble music.

Kelty Travel

If you ever spend time away from home you should own one of our Travel Conversions.

All of our Conversions will function perfectly as both a backpack and a piece of luggage. When used as luggage keep the back panel zipped up, or, unzip the back panel, pull out the suspension system and you have a quality backpack.

All six of our conversions feature Cordura® Nylon for good looks and strength.

Please send off for our 1984 catalog and read all about it.

Kelty Pack, Inc.
118 Industrial Road
New Haven, Missouri 63068
(314) 237-4427

Cordura® is a DuPont registered trademark

CORDURA

The Sierra Club is a one-of-a kind environmental organization with a rich heritage. How much do you know about it? The following quiz is guaranteed to put your knowledge to the test.

If you're a new member, don't be discouraged; the questions have been designed to give old-timers and newcomers alike a taste of the Club's history. When you've finished, you'll have a fuller appreciation of the qualities that make the Sierra Club special.

(A word to the about-to-be-wiser: Some questions have more than one correct answer.)

PEGGY WAYBURN

1. The Sierra Club's Articles of Incorporation were filed in San Francisco in 1892. Who founded the Club?

A. Henry Thoreau
B. William E. Colby
C. J. Henry Senger
D. John Muir

2. Who of the following were founding members of the Sierra Club?

A. A chief justice of the California Supreme Court
B. A United States Court of Appeals judge
C. A United States senator
D. A San Francisco Bay Area university president
E. A great California botanist
F. A former shepherd

3. The *Sierra Club Bulletin* (now *Sierra*) has been published since January 1902, with interruptions only when the United States was at war.

TRUE FALSE

4. During its early years the Sierra Club was primarily a Sierra Nevada mountaineering club.

TRUE FALSE

5. The San Francisco Bay Chapter was formed in 1911 as the first official chapter of the Sierra Club.

TRUE FALSE

6. The Sierra Club's original Declaration of Purpose (contained in the Articles of Incorporation) opened with which one of the following statements?

A. To prevent the invasion by roads of the Sierra Nevada and wilderness everywhere . . .
B. To explore, enjoy, and render accessible the mountains of the Sierra Nevada . . .
C. To explore, enjoy, and preserve the Sierra Nevada and the scenic resources of the United States . . .
D. To educate people about the beauty and value of the Sierra Nevada and other mountain regions . . .

7. The Sierra Club has been influencing public policy since it was established. Early on, at least two Presidents of the United States listened to and were influenced by the Club.

TRUE FALSE

8. In 1916 the Sierra Club was a prime mover in the establishment of the National Park Service. However, the Club played no role in the creation of the U.S. Forest Service.

TRUE FALSE

9. The Sierra Club conducted two pioneer climbs of Mt. Whitney in 1904. A total of how many people—including both climbing parties—made it to the top?

A. 25 *B.* 12 *C.* 184 *D.* 139

10. After World War II, a major event caused the Sierra Club to assume a more forceful national role. Do you know which of the following events it was and in what year it occurred?

A. The First Sierra Club Wilderness Conference in 1949
B. The organization of Earth Day in 1970
C. The Club's Diamond Jubilee in 1967
D. The proposed flooding of Dinosaur National Park in 1952

11. Founded with 182 members, by 1908 the Sierra Club had a membership of 1,000. What was the Club's membership when the decision was made to grow and "go national"?

A. 5,000 *D.* 12,000
B. 50,000 *E.* 102,000
C. 7,000 *F.* 3,000

12. To form a chapter of the Sierra Club, at least 50 Club members in good standing must petition and be approved by the Board of Directors. How many chapters does the Club currently have?

A. 13 *B.* 27 *C.* 102 *D.* 56

13. Originally, members of the Sierra Club Board of Directors could serve unlimited terms. Who served the longest term in the Club's history?

A. John Muir
B. Lewis Clark
C. Richard M. Leonard
D. William E. Colby

14. The Sierra Club's cleanup program was launched in 1958 with a one-week cleanup trip to Bullfrog Lake in Kings Canyon Na-

tional Park. In seven days, how much litter—rusted cans, salmon-egg jars, old shoes, foil, broken glass, and the like—did Club members gather, sack up, and pack onto mules to be carried out?

A. 6,000 pounds
B. 1,800 pounds
C. 1,000 pounds
D. 3,000 pounds

15. Which of the following was the first of the award-winning Exhibit Format Series of Sierra Club Books, and when was it published?

A. *Words of the Earth*, Cedric Wright, 1958
B. *This Is the American Earth*, Ansel Adams and Nancy Newhall, 1960
C. *In Wildness Is the Preservation of the World*, Eliot Porter, 1962
D. *Almost Ancestors*, Theodora Kroeber, 1965

16. Most Club chapters are made up of groups, each of which may conduct its own meetings, outings, and other activities. How many groups does the Club now have in all?

A. 712 *B.* 320 *C.* 55 *D.* 102

17. Along with a traditional Vice-President elected by the 15-member Board of Directors, the Sierra Club also has a number of other Vice-Presidents. Do you know how many?

A. 14 *B.* 6 *C.* 18 *D.* 21

18. The first woman elected to the Sierra Club Board of Directors was Marion R. Parsons, who served from 1914 to 1933. Who was the first woman President of the Sierra Club, and when was she elected?

A. Aurelia Harwood, 1927
B. Charlotte E. Mauk, 1943
C. Marion R. Parsons, 1918
D. Virginia Best Adams, 1932

19. Below is a list of major awards that may be given annually by the Sierra Club, along with a list of the various achievements they are meant to honor. Can you match them correctly?

1. John Muir Award
2. Edgar Wayburn Award
3. William O. Douglas Award
4. Special Achievement Award
5. William E. Colby Award
6. Francis P. Farquhar Award
7. Ansel Adams Award
8. Oliver Kehrlein Award
9. Raymond Sherwin Award

A. Distinguished legal achievement
B. Greatest service in internal Club affairs
C. Conservation achievement of the highest order
D. Mountaineering
E. Finest outdoor photography
F. Greatest achievement in international affairs
G. Distinguished political achievement
H. Greatest contribution to Club outings
I. Highest achievement in a particular Club effort

20. For many years the Sierra Club enjoyed its fully tax-deductible status. In other words, not only was the Club considered a nonprofit organization, but gifts to the Club could be deducted by donors. In what year—and why—did the Sierra Club lose this status?

A. In 1954, over the Dinosaur National Monument controversy
B. In 1981, when the Club gathered more than a million signatures opposing Secretary of the Interior James Watt
C. In 1966, over the Grand Canyon dams controversy
D. In 1969, when the Club opposed the confirmation of Walter Hickel as Secretary of the Interior

21. The Sierra Club has long recognized the importance of urban environmental needs. However, due to limited membership and to budget constraints, the Club must limit itself to working only for "pure" conservation causes, such as wilderness.

TRUE FALSE

22. Although the Sierra Club is aware of the global aspects of environmental concerns, it does not take an active part in international conservation efforts, preferring to concentrate its energies on the home front.

TRUE FALSE

23. The Sierra Club's National Outing Program offers about 230 outings a year. Chapters and groups may also have outing programs. What is the approximate total number of outings offered by the Sierra Club annually?

A. 500 *B.* 5,000
C. 3,000 *D.* 8,000

24. The High Trip, first held in 1901, was a remarkable Sierra Club invention that took as many as 200 travelers on comfortable alpine outings, carrying necessary equipment on mules and providing sumptuous food. Although now limited entirely to the Sierra Nevada, this legendary outing is still the Club's most popular outdoor undertaking.

TRUE FALSE

25. Which of the following are not immediate members of the Sierra Club "family," but rather are related but independent organizations?

A. Sierra Club Books
B. *Sierra* magazine
C. The Sierra Club Foundation
D. The Sierra Club Legal Defense Fund
E. The Sierra Club National Outing Program
F. The Sierra Club Committee on Political Education

26. The Sierra Club Legal Defense Fund handles only Sierra Club legal matters.

TRUE FALSE

27. The Sierra Club has gained fame (and sometimes notoriety) for leading successful battles to preserve scenic resources. (For example, the passage of the Alaska National Interest Lands Conservation Act in 1980 and the establishment of Redwood National Park on Redwood Creek in 1968 were particular Club victories.) The Club's present priorities include which of the following?

A. Clean-air legislation
B. Clean-water/toxics legislation
C. Wilderness designation
D. Public-lands defense
E. Energy leasing and conservation
F. National forest and Bureau of Land Managment planning
G. Agricultural-soil conservation
H. Budget and appropriations of the federal government

28. How does the Sierra Club differ from other major environmental organizations such as the National Audubon Society, the Wilderness Society, the National Wildlife Federation, and Friends of the Earth?

A. It is attracting more and more members.
B. Its policies are set by a member-elected Board of Directors and carried out by both volunteers and staff.
C. It has led many unpopular environmental fights and assumed what is sometimes considered an extreme position in defense of its principles and causes.
D. It conducts many different outings all over the world.

ANSWERS *(NO PEEKING)*

ANSWERS

Sierra Club founder J. Henry Senger.

1. *C and D.* Although John Muir is considered the spiritual founder of the Sierra Club, Professor J. Henry Senger of the University of California conceived the idea of such an association and, with Muir's help and blessing, named and organized it.

2. *A through F.* The former shepherd was, of course, John Muir.

3. FALSE. The *Sierra Club Bulletin* was first issued in 1891, and it has been published without interruption ever since.

Sierra Club Bulletin *#1 featured two Prices for the price of one—a quarter.*

THE SIERRA CLUB BULLETIN

4. FALSE. In addition to its efforts to preserve the Sierra Nevada, the Sierra Club worked to establish Mt. Rainier National Park (1899) and to preserve California's coast redwoods (1895 and 1898) and the Calaveras Big Trees (1900). The early Club also had fish-planting, trail-building, and peak-naming programs.

5. FALSE. Although the Sierra Club was headquartered in San Francisco from the start, the Angeles Chapter, formed in 1911, was the first official Sierra Club chapter. The San Francisco Bay Chapter was not formed until 1924.

6. *B.* A half-century after the Club proposed to "render accessible" the Sierra Nevada, these mountains were suffering from overuse. The Club's Statement of Purpose was therefore revised, and the word "preserve" took the place of "render accessible."

7. TRUE. John Muir influenced the conservation policies of both William Howard Taft and Theodore Roosevelt. The latter accompanied Muir on a trip to Yosemite and the Mariposa Grove in 1903.

T.R. and John Muir enjoy a bully view.

8. FALSE. The Club advocated the establishment of forest reserves when it was only a year old, and in 1905 it worked for adoption of the national forest reserves (forerunners of the U.S. Forest Service) under the Department of Agriculture.

The earthquake and fire that decimated San Francisco in 1906 destroyed many Sierra Club records.

9. *D.* Joseph N. LeConte first led "about 40" members of a Sierra Club outing up Mt. Whitney in 1903. A few days later, William E. Colby led 103 on a second successful climb of California's highest peak. A contemporary notice in the *Sierra Club Bulletin* gave 139 as the total number of climbers to complete the ascent.

An early Sierra Club Outing.

10. *D.* When Dinosaur National Monument was threatened by dams in the early 1950s, the Club recognized a threat to the national park system itself and decided to enter the battle on a deliberately national scale.

11. *C.* In 1952 the Sierra Club had 7,000 members. By 1960 its membership had more than doubled.

12. *D.* The Sierra Club has 56 chapters, representing membership in every one of the United States, as well as in

Philip Adam

eastern and western Canada. The smallest chapter, Dacotah, has 636 members; the largest, Angeles, has 40,969. A few states share chapters, while California alone has 13.

13. *D.* William E. Colby served as a Director of the Club fron 1900 to 1949. For 44 of those years he was the Club's Secretary, and for two years its President. He also founded the Club's outing program in 1901 and chaired the Outing Committee for 36 years. John Muir served 22 years, during which time he was Club President. Lewis Clark served from 1933 to 1969, and Richard M. Leonard from 1938 to 1973.

14. *A.* In addition to the three tons of trash removed from the Sierra Nevada in 1958, participants in the Club's cleanup trips removed another 12 tons during the next three years.

15. *B.* Published in 1960, *This Is the American Earth* used the magnificent photographs and compelling text of an earlier Sierra Club exhibit shown at both the California Academy of Sci-

ences and the Club's Le Conte Lodge in Yosemite; the exhibit was also circulated by the Smithsonian Institution and the U.S. Information Agency. *In Wildness* (1962) was the first color volume in the Exhibit Format Series,

William E. Colby, long-time Club leader.

which was produced by David R. Brower (currently a Club Director).

16. *B.* The Club has 320 groups. Only two chapters, Santa Lucia and Ontario, have no groups. North Carolina has 15 groups, and Angeles, Florida, and Great Lakes each has 14.

17. *C.* Of the Sierra Club's 18 Vice-Presidents, 13 represent the regions into which the Club is broadly organized: the Alaskan, Appalachian, Canadian, Gulf Coast, Hawaiian, Midwest, Northeast, Northern California, Northern Plains, Northwest, Southern California, Southern Plains, and Southwest regions. With the exceptions of Alaska and Hawaii, each of these Regional Vice-Presidents chairs a Regional Conservation Committee (RCC) that deals with issues within its territory as well as with broader conservation concerns. The other five Vice-Presidents represent certain principal concerns of the Club: Legal Affairs, Political Affairs, Parks and Protected Areas, Planning, and International Affairs. (The Legal Affairs and Political Affairs posts are currently

held by Club Director Phil Berry, under the rubric Conservation Law.)

18. *A.* Aurelia Harwood was Sierra Club President for the 1927-1928 term. The other women listed served on the Board of Directors.

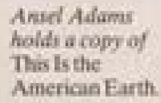
Aurelia Harwood.

19. *1-C, 2-G, 3-A, 4-I, 5-B, 6-D, 7-E, 8-H, 9-F.* The Muir and Wayburn awards, the Sierra Club's highest honors, may be awarded to nonmembers.

20. *C.* When, in 1966, the Sierra Club ran full-page ads in major newspapers protesting the possible flooding of the Grand Canyon, the Internal Revenue Service ruled that contributions to the Club were no longer tax-deductible, because of the Club's "substantial" legislative activities. The Sierra Club Foundation, established when the possibility of such an IRS ruling appeared on the horizon, was—and is— a fully tax-deductible organization.

21. FALSE. The Club is actively involved in fighting for such urban concerns as clean air, clean water, mass transportation, and open space. It also has an active Inner City Outings Program, initiated in 1970, that has now spread to 15 major cities across the country. This program takes the handicapped as well as the underprivileged on outings, including river-running.

22. FALSE. The Sierra Club was one of the first environmental organizations to be



Ansel Adams holds a copy of This Is the American Earth.

REI
Quality Outdoor Gear and Clothing Since 1938

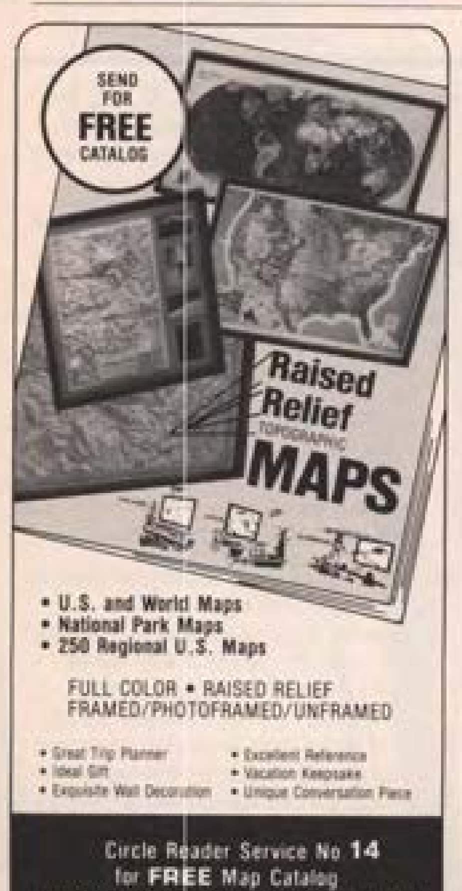
Handsome Hat Stops Wind and Rain

Windproof, waterproof and breathable, the REI Gore-Tex® Rain Hat lets you enjoy the outdoors in all weather. The Gore-Tex® laminate used for this hat blocks out rain and stays cool when you're active. Wide brim protects from sun and rain. **Offer expires July 31, 1984. REI guarantees satisfaction or your money back.**
Item #TC40-291. Sizes S, M, L, XL in Royal(2) Navy(4) Forest Green(5) Slate Blue(6) Tan(8) Chili Bean(9) **$10.95**ppd

Please send me the following REI Gore-Tex® Rain Hat(s):
Quantity / Item # / Color # / Size

☐ YES! I want to become an REI member. Enclosed is $5.00.
☐ Check ☐ MasterCard ☐ Visa ☐ Please send me a FREE color catalog.
Acct. # ________ Exp. Date ________
Name
Address
City ________ State ________ ZIP ________
Order TOLL FREE: **1-800-426-4840;** Washington state: **1-800-562-4894.**
Canada, Alaska and Hawaii toll call: 1-206-575-3287.

REI, P.O. Box C-88127, Seattle, WA 98188 84515



granted nongovernmental status at the United Nations. Since 1971 it has had a professionally staffed International Office (The Earthcare Center) in New York City. The Club is also taking an increasingly active role in environmental efforts and deliberations on the international scene, and is concerned about endangered parks as well as endangered species worldwide.

23. *D.* Chapters and groups account for the great majority of Club outings, which average nearly 8,000 yearly. Some 10 percent of the Club's 1984 national outings will be foreign trips.

24. FALSE. The last High Trip was held in 1972. Long before then it had been greatly reduced in size, and for many years great care had been taken in the selection of camping sites and packing practices had been modified (e.g., pack animals carried in their own feed).

25. *A, B, and D* are immediate members of the Sierra Club "family" and are staffed and financed by the Club. The Sierra Club Foundation, the Sierra Club Legal Defense Fund, and the Sierra Club Committee on Political Education (SCCOPE) are independent organizations.

26. FALSE. While the bulk of its work is for the Sierra Club, the Sierra Club Legal Defense Fund is an independent law firm. It can and does take cases on behalf of other groups or organizations with similar interests. SCLDF is one of the country's most highly regarded environmental-law firms, with an enviable litigation record.

27. *A through H.* In an increasingly complex world, the Sierra Club recognizes a burgeoning number of important environmental challenges. While maintaining its steadfast support for national parks, wilderness, and scenic resources, the Club has become concerned with the problems of achieving and preserving a livable as well as a beautiful world.

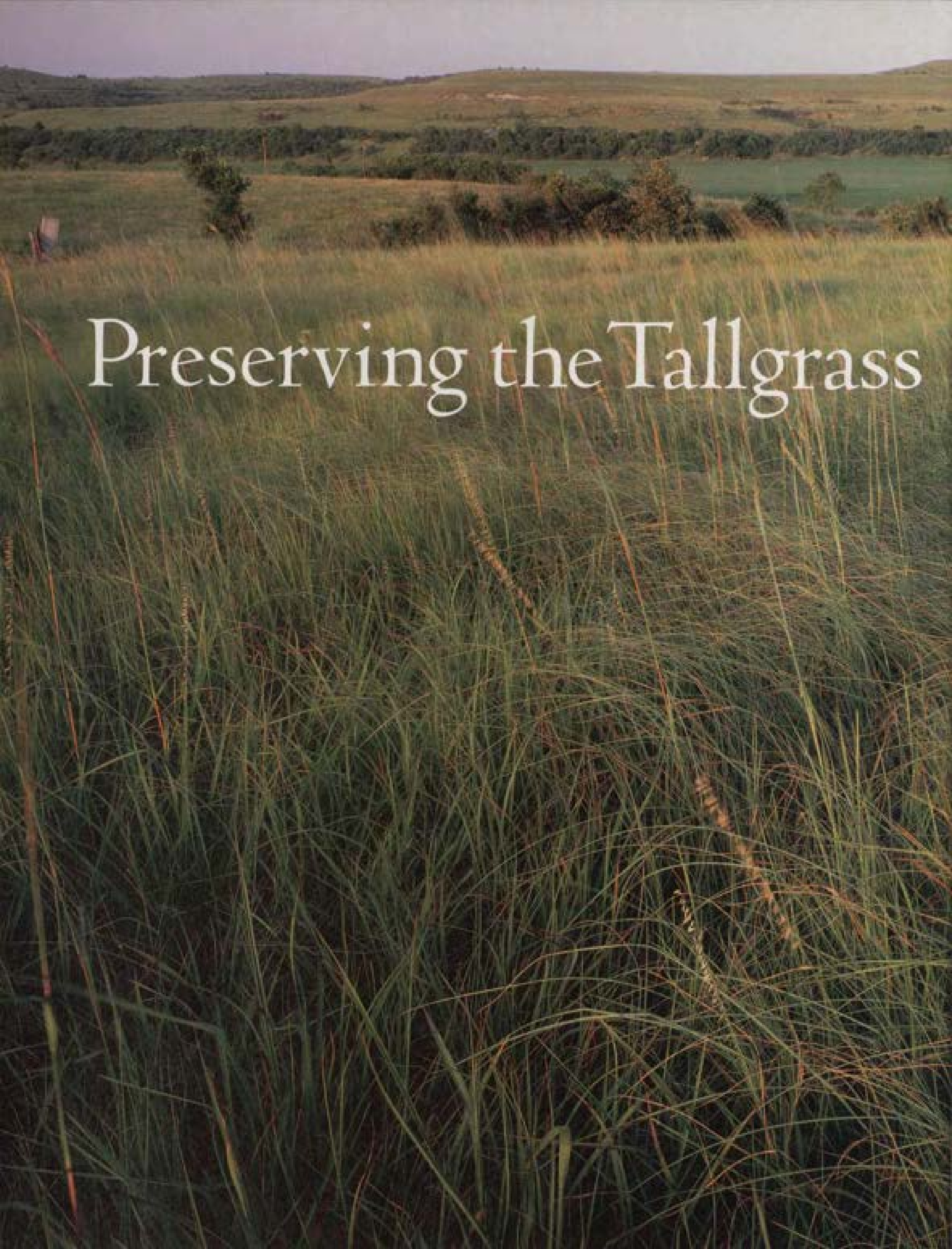
28. *B.* While all of the statements are true of the Sierra Club, several are also true of other environmental organizations. But unlike the others, the Sierra Club is a democratic, grassroots organization run primarily by its volunteer membership. ☐

Peggy Wayburn is the author of three Sierra Club Books about Alaska. She played an active role in several Sierra Club Wilderness Conferences.

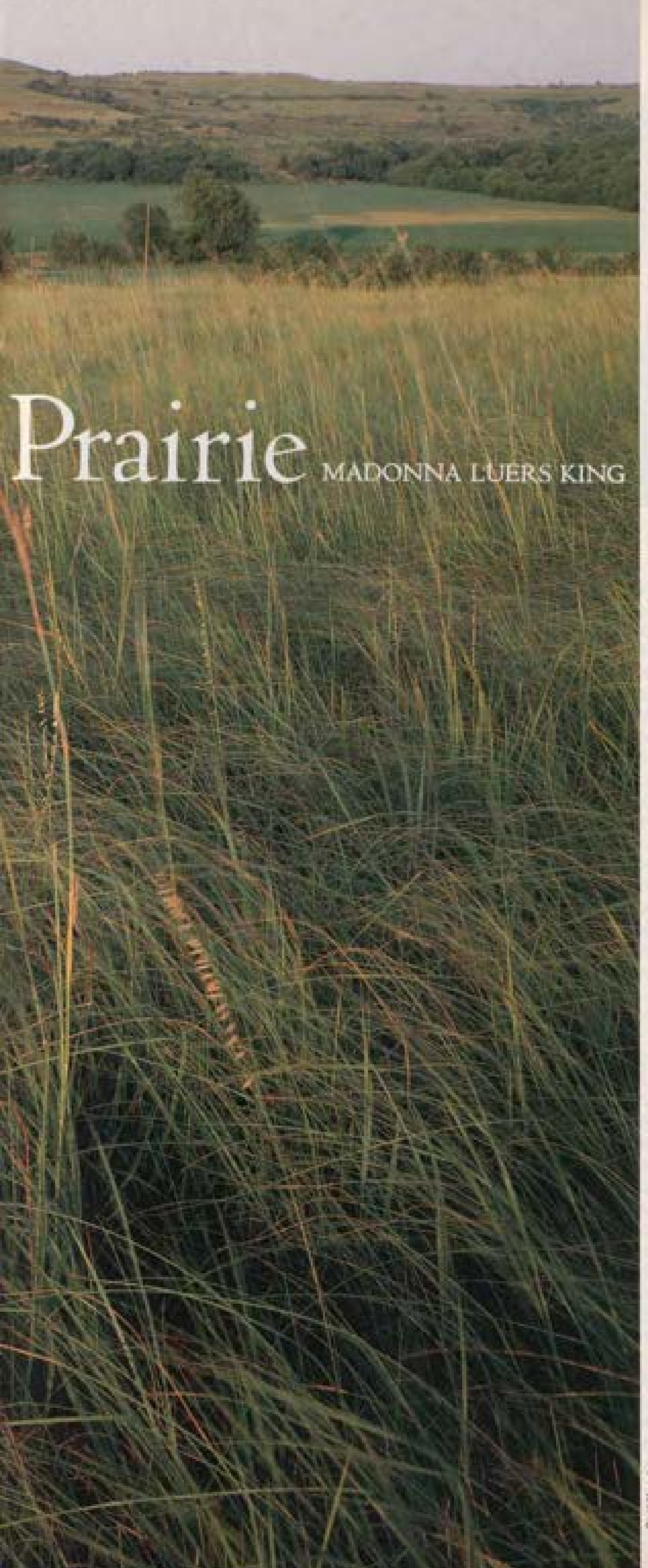
On Board with RAMAR.

RAMAR
60/40
The original 60–40 cloth from the Arthur Kahn Co.

Protect yourself from the misty ocean breezes. Snuggle up in Ramar, the lightest, strongest, most comfortable 60/40 fabric ever developed. Woven and finished in the U.S.A., Ramar is stormproof, snag resistant and treated with ZE PEL® rain/stain repeller for added durability. At any altitude, in any weather, for any outdoor activity, make sure your rugged outerwear says Ramar.



Preserving the Tallgrass



Prairie

MADONNA LUERS KING

While I know the standard claim is that Yosemite and the like afford the greatest natural shows, I am not so sure but that the Prairies and the Plains last longer, fill the aesthetic sense fuller, precede all the rest, and make North America's characteristic landscape.

—WALT WHITMAN

LIKE HER ANTHEMS, America's national parks have been created to extol the natural beauty of the country, "from the mountains, to the prairies, to the oceans white with foam." While park status has been granted to many of the nation's spectacular mountain ranges and thundering seashores, conspicuously absent from the roster are the rippling grasslands of the Midwest.

America's tallgrass prairie, with its vast sea of wine-colored grasses and its wildflower splashes, is certainly as extraordinary and unique among the world's plains, pampas, and savannahs as the redwoods are among the Earth's forests. But despite this distinction, 50 years of advocacy have failed to gain the tallgrass prairie inclusion in the national park system. A major reason for this omission is the decades-long struggle between opposing groups of prairie-lovers.

The ranchers who own the only sizable virgin tallgrass prairie left in America, a 50-mile-wide strip through eastern Kansas called the Flint Hills, want to protect this land too—but without the government's help. Concerned about their cattle-grazing operations, many of which are fifth-generation family businesses, these prairie-lovers fear government condemnation of their land and maintain that the Flint Hills do not need federal protection. Because of the soil's flintlike rock, they say, the region is suitable only for grazing and thus will continue to escape agricultural development.

It is that unplowable limestone, and not anyone's great devotion to the land, that has preserved the Flint Hills, according to Thomas Kneil, conservation chair of the Sierra Club's Kansas Chapter. And now, in economically hard times, other forms of development, from power plants to highway construction, are "nibbling away at the prairie," in Kneil's words. "I'm afraid that if someone came along tomorrow with a million dollars to buy land and create a Six Flags Over the Flint Hills theme park on top of that limestone," he says, "many ranchers would be hard-pressed not to take it."

Midwestern environmentalists are currently hoping that a newly available tract of prime Flint Hills prairie can be purchased and protected by the federal government. When the 29,014-acre Barnard Ranch on the Kansas/Oklahoma border failed to solicit an adequate bid after it came up for sale last fall, the National Audubon Society led environmental groups in seeking

The Flint Hills near Alma, Kan., are one of the few tracts of tallgrass prairie that have not been plowed under.

David Muench

Summer sunset adds a golden touch to the green vistas of the Flint Hills.

federal purchase. Because the Osage Indians want to retain their mineral rights to the land, the possibility of establishing a national preserve rather than a full-fledged national park is being explored. The trustees of the property are willing to sell to the government for $400 to $500 an acre. Such a purchase would amount to less than $13 million, which is about what it would cost to construct just two and a half miles of interstate highway in the area.

The effort under way also includes extension of the preserve through the designation of a "parkway" on existing roads through the Flint Hills. Save the Tallgrass Prairie (STP), a group headquartered in Shawnee Mission, Kan., is especially enthusiastic about the parkway concept. Executive Director Elaine Shea explains that a prairie parkway, or "greenline management plan," could keep the Flint Hills largely in private ownership—not a single landowner would be displaced—while allowing some public use. It could include a network of roads through some of the most beautiful areas of the Flint Hills, Shea says, with scenic turnouts and interpretive markers on private-land easements. Along with private land-use covenants or development codes, bits and pieces of public land could be acquired as small parcels come up for sale.

The concept is not new to the nation, or even to Kansas. Greenline planning, according to the National Parks & Conservation Association, is an idea that has been gathering strength since the early 1970s, especially in the Northeast, where private landownership is predominant. The Tug Hill region of northern New York state, for example, is a wild and undeveloped plateau of privately owned forest land surrounded by small towns, farms, and roadways. A resource-management plan and a zoning-and-development code were created in 1972 by a state commission at the insistence of New Yorkers concerned about impending development and the ultimate loss of the area.

The 1.1-million-acre Pinelands National Reserve in New Jersey, designated under the National Parks & Recreation Act of 1978, is a greenline plan closer to what prairie enthusiasts such as Shea envision. The private land within the reserve boundaries is under development and zoning review by a joint state and federal commission. In addition, public-lands acquisition in New Jersey is made through the state Department of Environmental Protection, using Interior Department funds.

In Kansas itself, a smaller-scale attempt at a prairie parkway was made 20 years ago. State highway-department officials marked out a scenic drive through the Flint Hills—one that can be traced on highway maps of the state today—but the program never went beyond that stage.

With or without national-preserve purchase, adoption of such a parkway compromise would at least move off dead center a kind of Hatfield-and-McCoy feud over preservation of America's last vestige of tallgrass prairie. After 50 years of consideration, both sides agree that the concept might be the beginning of the end of a very long story.

The origination of the prairie park idea in the 1930s is credited to Dr. V. E. Shelford of the University of Illinois, who studied prairie-animal behavior (although the 19th-century artist George Catlin suggested preserving the Plains Indians' ecosystem long before that). Several federal government studies of prairie communities were undertaken then and through the 1950s.

By the early 1960s the National Park Ser-

vice was hoping for one prairie park or preserve, having narrowed down its choice—after an extensive site study—to the Kansas Flint Hills and a spot in Pottawatomie County, just north of Kansas State University in Manhattan. This preferred site, with minimal visual disturbances, included about 60,000 acres—an area that scientists estimated would be required to support natural plant and animal populations, to serve research needs, and to accommodate visitors. Assuming that the government's power of eminent domain would prevail, then-Secretary of the Interior Stewart Udall went to inspect the prospective park; he was quickly familiarized with Midwest landowners' feelings about property rights when his helicopter was greeted with poised shotguns. The prairie park idea was set back a few notches, and for several years attention focused on such alternatives as the prairie parkway.

THE PRAIRIE PARK ISSUES resurfaced with the sense of environmentalism that swept the country in the 1970s. Along with this growth in appreciation came citizen action groups. Shea's group (STP) was founded by Kansas naturalists and other park proponents; at about the same time, Flint Hills ranchers and other park opponents formed the Kansas Grassroots Association, Inc. (KGA).

Further Park Service studies were undertaken, and by 1975 the definitive bureaucratic work was complete—a two-inch-thick "Preliminary Environmental Assessment, Proposed Prairie National Park," accompanied by a 65-page "Alternate Study Areas" report. The study determined that of all the kinds of prairies studied earlier, the tallgrass community is the most endangered and vulnerable to changing land use. Out of the six original Flint Hills sites in the study, three have been deemed the cream of the crop: Waubansee West, a 60,000-acre site between Topeka and Manhattan; Chase South, a 100,000-acre site south of Emporia and west of the Kansas Turnpike; and Osage, a 93,000-acre site on the Kansas-Oklahoma border that includes the Barnard Ranch. (The earlier favorite in Pottawatomie County was eliminated because a recreation reservoir, power plant, and highway have subsequently been built in the area.)

Since the 1975 study, Rep. Larry Winn (R-Kan.) has introduced several bills that would protect one or all of the three sites. But because the proposals involved government condemnation of private land, they never came to a vote.

According to rancher and KGA chairman Jim Hess, too many of the problems with western range management have come from the "incompetent stewardship" of the Bureau of Land Management and the Forest Service. "We take care of the Flint Hills better than any government agency could," Hess says. "We burn the prairie grasses regularly, just as the forces of nature and the Indians did before settlement, to keep our cattle in productive grazing areas. We avoid overgrazing, although I suppose a few ranchers have felt pressured to go into year-round cow-calf operations instead of traditional summer-grazing-only steer production. In general we follow sound soil- and water-conservation practices we've either learned ourselves in agricultural college or that researchers and extension folks tell us about. We love this land, we have reverence for it, so we take care of it."

The Sierra Club's Kneil points out that not all Flint Hills ranchers have that "good stewardship" ideology. "My personal observation is that more and more [of the Flint Hills] is highly overgrazed," he says. Economic pressures, he reiterates, force ranchers to get as much from their rangeland as they can in the short run.

Kneil also notes that, although it is difficult to document, "there's a lot more absentee landownership in the Flint Hills than people are willing to admit." Kansas City residents with second homes or investment interests in the Flint Hills, he indicates, certainly don't have the reverence for and love of the land that Hess professes. (STP's Shea reports that the extent of absentee landownership in the Flint Hills is something the group has long sought but failed to establish absolutely.)

Hess (and the KGA's 1,000-some members) have lobbied tirelessly against all measures to set up a prairie national park in the Flint Hills. Their attitude, for the most part, is simply one of opposition to government intervention in matters affecting land use and property rights. "We shouldn't have to sell to the government if we don't want to," says Hess, referring to past land-acquisition measures tried in Congress. "Even with fair market prices assured, it's just the principle of the thing."

Locking horns with STP with every new move in the prairie park issue, the KGA believes that those few people are the only ones really enthusiastic about prairies. Hess says that, like many Flint Hills ranchers, he welcomes visitors to his family's 24,000-acre ranch, which is part of the Waubansee West park-study site. But few ever stop in to enjoy the prairie. "I wonder how many prairie-lovers want to wade through the big bluestem in the 105-degree heat we get at the peak of summer," he says. "There's an over-romanticized view of the prairie among too many people who don't really know it."

Hess says the KGA supports the prairie parkway or greenlining concept, including the arrangements of scenic easements. "I

Take along the Klepper America folding boat to any part of the world. Carry it on a plane, train, or throw it into the trunk of your car. It's that easy to travel with the versatile Klepper.

Enjoy these famous high quality boats used the world over. The Klepper developed and continues to lead in sea kayaking. Also excellent for river touring, some whitewater, lake cruising, fishing and sailing.

Get to know more about these masterpieces. Send for your free illustrated brochure and pick the boat to suit your travel and water-sport needs.

KLEPPER AMERICA folding boats kayaks
35 Union Square West, SC-284
New York, New York 10003

Please send information on:
☐ folding boats ☐ kayaks
☐ accessories

Name ______
Address ______
City ______
State ______ Zip ______

think most people would rather just drive through the prairie and enjoy the views anyway," he says. "For those who want to get 'into' the prairie more, and for scientific research needs, there's always Konza."

Konza Prairie is an 8,616-acre natural area just south of Kansas State University in Manhattan. Owned by The Nature Conservancy, Konza is managed by KSU for ecological research and education. Access to the area is by appointment only and is limited to bona fide prairie interest groups or individuals. KSU Professor Lloyd Hulbert, director of the research area, reports that some 50 groups toured Konza last year; if visits grow beyond that, he says, research time and effort will undoubtedly be hampered. For that reason, Hulbert doesn't like to see the debate over a "prairie for the public" focus on Konza.

"Besides," Hulbert says, "a big part of the reason for a prairie park is preservation of a whole ecosystem of plant and animal species, and you can't do that with this small a parcel."

The parcel should be at least 60,000 acres, but at best 300,000 acres, says STP cofounder E. Raymond Hall, professor emeritus of natural history at the University of Kansas in Lawrence. That kind of acreage is needed to avoid "genetic drift" between species, particularly the plants preserved in a prairie gene pool. And protecting that gene pool, Hall says, may prove vital to our future well-being.

"In general, native species thrive better than nonnative species," Hall explains. "But of our eight principal grain crops, all but one [corn] are nonnative species, brought from the Old World. Of the 12 animal species raised in North America and used for food, medical research, and diagnosis of disease, none is native." With the pressures and problems of food production alone, Hall explains, the need to develop domestic strains of other plant and animal species—preferably the hardier native species—from a preserved gene pool is increasingly important. "It should be clear," Hall says, "even to those people interested only in the well-being of our own species—homo sapiens—that Congress needs to move forward without further delay to establish a tallgrass-prairie preserve."

The KGA's Hess agrees that man is part of the prairie ecosystem, but thinks for that very reason a park that would eliminate man's "living in harmony with the land" is not desirable. "We fifth-generation ranchers, with our sons growing up to follow in our footsteps, are part of the prairie culture too," he explains. "Trying to set aside a piece of the prairie to return it to presettlement days is a little unnatural itself. Is our grazing cattle here today so out of line with how this area would have been used without man anyway?"

Hulbert hopes to discover the answer to that question by researching the differences between domestic livestock and such native foragers as elk, antelope, and buffalo. The theory, he says, is that cattle, as an introduced species, have different vegetation preferences, and thus prohibit growth of certain native prairie species while promoting growth of invader or disturbance species. Even if studies were to reveal that native foragers are "better" for native prairie vegetation growth, Hulbert acknowledges that "we'll never restore a piece of prairie to presettlement times." Boundaries of parks or preserves or parkways always dictate management of some sort. "But just because you can't have a mansion," he points out, "doesn't mean you don't want a house."

STP's Shea staunchly defends the need to save a large piece of prairie, despite Hess' assurances of sound rancher management. "The Flint Hills may not see much plowing, but they're not guaranteed against other kinds of changes," she says, echoing the Sierra Club's Kneil. The Kansas Power & Light Company's Jeffrey Energy Center in Pottawatomie County is expanding its reservoirs, coal-storage areas, and power plants; the company is also building the Wolf Creek nuclear power plant south of Topeka. Oil and gas exploration are on the rise, and the potential for surface mining of coal is great. Highways, power lines, and other intrusions on the prairie continue to multiply, just as they did at the Pottawatomie park-study site between NPS surveys. All these and more side issues keep Shea and other STP members busy lobbying at the state capitol.

Shea recognizes that, to achieve their goal of a prairie park, environmentalists must overcome what might be an insurmountable obstacle: an ingrained, independent ethic about land use that is central to the very settling of America. But she also believes that people will grow to understand that the prairie, of common heritage to all Americans, is worthy of preservation and would benefit from public management.

Whether this inland ocean of rippling grasses will be seen from within the spacious boundaries of a prairie national park or preserve or from a roadside overlook is yet to be determined. What is important is that Americans may someday have the opportunity to travel between the purple mountain majesties of the East and West to view their nation's heartland, the authentic fruited plain. ☐

Madonna Luers King is a reporter for the Spokane (Wash.) Spokesman-Review. *She researched the prairie park story while studying journalism at the University of Wisconsin.*

cannondale invites you to test ride the Aluminum bicycle.
Look it over. Note the large diameter tubing. Lift it. Feel how light it is. Now mount up and strap in. Push this bike to the max. Experience the almost uncanny way in which it smooths out rough stretches of road. Attack the hills. The bike bursts forward with no flex or fishtailing-no wasted energy. Let the exhilaration of excellent performance rush through you. Riding Cannondale aluminum, the effort you put in is the motion you get out.
Contact us for the location of the nearest authorized Cannondale Test Ride Center. We'll also send you a free copy of our booklet "The Aluminum Advantage," the story of Cannondale bicycles.
Cannondale Corporation, Dept. S1
9 Brookside Place, Georgetown, CT.06829
Call our toll-free hotline:
1 (800) BIKE USA
cannondale
USA

The right stuff. The other stuff.

Quallofil® insulation.
40% more stuffable. 15% lighter than the man-made competition.

The smaller and lighter the better when it comes to carrying your room and board on your back.

Meet the right stuff: Quallofil* insulation.

At equal warmth, Quallofil* insulated sleeping bags are 40% more compactible than bags filled with the leading high-loft, continuous filament synthetic. And Quallofil* insulation is warmer, so you get the same warmth with 15% less weight.

What's more, Quallofil* is *just* as compactible as down...with none of down's drawbacks. When down gets damp, it loses its loft and retains only 25% of its warmth.

When Quallofil* gets damp, it retains 90% of its warmth and dries 5 times faster than down. Some difference!

*Du Pont certification mark for battings of Dacron® 113 polyester made under Du Pont quality standards.

So get all the comfort, lightness, warmth, and stuffability that advanced Du Pont technology can offer. Choose the right stuff: Quallofil* insulation for all your camping and cold-weather needs. Ask for it by name.

QUALLOFIL

TOUGH TESTED INSULATION

DU PONT

Sierra Club Outings

It's not too late to sign up for a 1984 Outing

There is still space available on a large number of 1984 Sierra Club Outings. If you act promptly you can probably find space on any of the trips listed below. If a trip is not listed below, check with the Outing Department—vacancies may have occurred. Please see the January/February issue of *Sierra* for reservation and cancellation information and an application form. Make sure you read the reservation and cancellation policy carefully before applying. For more information on any of our 1984 Outings, send in the coupon on page 81 of this issue. Look for a listing of next year's Foreign Trips in the July/August *Sierra* and a list of 1984 Spring trips in the November/December issue.

Trip Number	E = Educational Outing • = Leader Approval Required	Date	Rating	Trip Fee (Including Deposit)	Deposit	Leader
	ALASKA					
66	•Lake Clark Backpack, Alaska	June 14-28		500	70	L&B Wilson
68	•Chitistone Canyon/Goat Trail Backpack	July 2-14		630	70	K&R Brooks
69	•Southern Kenai/Kachemak Exploratory	July 7-16		1025	70	M&J Lobel
71	Stikine River/Misty Fjords Raft Trip	July 18-Aug. 1		1580	70	John Ricker
75	•Kenai Wildlife Refuge, Highlight	July 29-Aug 8		865	70	Dolph Amster
	BACKPACK					
82	•Loyalsock Trail, Pennsylvania	June 23-30	L-M	210	35	Len Frank
84	•West Rim, Pecos Wilderness, New Mexico	June 24-30	M-S	190	35	Gail Bryant
87	•Cranberry Backcountry, West Virginia	July 8-14	L-M	190	35	Bob Goldberg
88	•Ruby Mountains Crest, Humboldt Forest, Nevada	July 8-14	M-S	180	35	Pete Nelson
89	•Kid Lakes, Kings Canyon Park, Sierra	July 13-22	M-S	215	35	Cal French
90	•Collegiate Peaks, San Isabel Forest, Colorado	July 14-23	M-S	235	35	Al Ossinger
91	•Weminuche Wilderness, Colorado	July 15-21	M-S	160	35	Don Lyngholm
95	•Minarets West Peakbagging, Sierra	July 20-28	M-S	170	35	Vicky Hoover
97	•Pacific Crest Trail, Toiyabe Forest, Sierra	July 21-29	M-S	170	35	Jim Carson
100	•Bridger Lake Leisure Loop, Wyoming	July 22-29	L-M	240	35	Bill Bell
102	•To Gardiner Lakes, Kings Canyon Park, Sierra	July 25-Aug 2	M	185	35	Ellen Howard
103	•Mount Cedric Wright, Kings Canyon Park, Sierra	July 26-Aug 4	M	185	35	Dwight Taylor
104	•Kaweah Peaks, Sequoia Park, Sierra	July 28-Aug 5	M	170	35	M&D Smith
105	•Amphitheater and Window Lakes, Sierra	July 30-Aug 9	S	215	35	Cal French
106	•Sky-Blue Lake Country, Sequoia Park, Sierra	Aug. 2-10	M	185	35	Wes Reynolds
108	•McGee Lakes, Kings Canyon Park, Sierra	Aug. 3-12	M-S	200	35	Ken Maas
110	•Eagle Cap Wilderness, Oregon	Aug. 5-13	M	190	35	Connie Spangler
112	•Around the Palisades, Sierra	Aug. 6-13	M-S	155	35	Jim Absher
115	•Tincup Lake, Sawtooth Recreation Area, Idaho	Aug. 7-18	M	255	35	Chuck Shinn
116	•In the Shadow of the LeConte Divide, Sierra	Aug. 9-18	L-M	185	35	Diane Cook
120	•Arrow Pass, Kings Canyon Park, Sierra	Aug. 10-19	M-S	205	35	David Reneau
121	•Yale Harvard Loop, San Isabel Forest, Colorado	Aug. 19-26	M-S	200	35	Bob Madsen
136	•Cottonwood Pass Trans-Sierra	Aug. 13-24	L-M	235	35	Daniel Reed
137	•Mineral King Trans-Sierra	Aug. 13-24	M	235	35	Bruce Straits
138	•Mt. Hood Circumnavigation, Oregon	Aug. 15-23	M	175	35	Bill Bankston
140	•Pacific Crest Trail, Kings Canyon Park, Sierra	Aug. 18-26	M-S	170	35	Bill Allen
141	•West Side of Thunder, Kings Canyon Park, Sierra	Aug. 18-26	M	190	35	Don Donaldson
142	•North Fork Entiat, Glacier Peak Wilderness, WA	Aug. 18-26	M-S	190	35	Mary Sutliff
150	•Lake Wit-so-nah-pah, John Muir Wilderness, Sierra	Aug. 23-Sept. 1	M	200	35	Gordon Peterson
151	•Kern Hot Springs, Sequoia Park, Sierra	Aug. 25-Sept. 2	M	170	35	Don Lackowski
153	•Tahoe Rim Trail, Toiyabe Forest, Sierra	Sept. 5-9	L-M	125	35	Serge Puchert
154	•Seven Gables, John Muir Wilderness, Sierra	Sept. 8-16	L-M	170	35	Ed Shearin
156	•Palisades Basin Exploration, Sierra	Sept. 15-23	M	175	35	Paul Cavagnolo
350	•North Rim Grand Canyon, Arizona	Sept. 29-Oct. 6	S	175	35	Jim Ricker
351	•Buckeye Canyon, Hoover Wilderness, Sierra	Oct. 6-13	M-S	140	35	Dennis Look
353	•The High Chisos/Outer Mountain Loop, Texas	Oct. 7-13	M	275	35	John E. Fine
354	•Bandelier and San Pedro Parks, New Mexico	Oct. 7-13	L	190	35	Steve Hanson
356	•Appalachian Trail Colors, North Carolina	Oct. 13-20	M	220	35	Dave Bennie

Trip Number	E = Educational Outing • = Leader Approval Required	Date	Rating	Trip Fee (Including Deposit)	Deposit	Leader
JUNIOR BACKPACK						
160	•Minarets Wilderness, Inyo Forest, Sierra	July 8-16	M	190	35	S&R McEwan
161	•Brewer Circuit, Sequoia/Kings Canyon, Sierra	July 14-22	M-S	190	35	Mark Gordon
162	•Isle Royale Park, Michigan	Aug. 4-10	L-M	220	35	Paul Reginier
163	•Columbine/Cyclamen Lakes, Sequoia Park, Sierra	Aug. 5-12	M	165	35	Andy Johnson
164	•Post Peak Pass Loop, Sierra Forest, Sierra	Aug. 12-19	L-M	165	35	Jenny Dienger
BASE CAMP TRIPS						
168	McGee Creek Alpine Camp, Inyo Forest, Sierra	July 12-21		250	35	Davies/Busch
169E	Malheur Wildlife Refuge Base Camp, Oregon	July 15-21		235	35	Marshall Gifford
172	Rangeley Lakes, Maine	Aug. 5-11		210	35	Kevin Walter
357	Black Range, Gila Forest, New Mexico	Oct. 7-13		315	35	Don Lyngholm
358	Death Valley at Christmas, California	Dec. 19-27		250	35	E&J Absher
359	Everglades Park, Florida	Dec. 26-31		220	35	Herb Schwartz
BICYCLE TRIPS						
183	•California Big Sur Coastline	June 16-24		175	35	Boyd Moore
184	•Finger Lakes, New York	June 17-23		235	35	John Kolp
185	•Wisconsin's Coast and Mountains	June 17-26		290	35	Betsy Sanders
186	•Northern California Coast	June 26-July 5		190	35	Bill Bankston
187	•Acadia Park/Mt. Desert Island Bike and Hike, ME	July 8-14		215	35	Margaret O'Neil
BURRO TRIPS						
190	•Mt. Whitney Country, Sierra	July 28-Aug. 4		400	35	Robin Spencer
191	•Cottonwood Pass, Sierra	Aug. 4-11		400	35	Linda Furtado
192	•Rocky Basin Lakes/Kern Canyon Overlook, Sierra	Aug. 11-18		400	35	Jack McClure
193	•Cottonwood Sawmill to Miter Basin, Sierra	Aug. 18-25		400	35	Ted Bradfield
194	•Lakes and Peaks South of Whitney, Sierra	Aug. 25-Sept. 1		400	35	Jack Holmes
BUS TRIP						
221	Mountain Majesty, AZ/NM/CO	Aug. 19-Sept. 2		725	70	Margaret Malm
FAMILY TRIPS			Parents and one child	Each Addl. child		
201	•Family Voyageur Canoeing, Missouri River, MO	June 13-19	1150	290	35	F&T Sitzman
HAWAII						
205	•Bicycle Tour of Hawaii	June 30-July 14		520	70	John Ruzek
HIGHLIGHT TRIPS						
211	Sawtooth Wilderness, Sawtooth Forest, Idaho	July 29-Aug. 7		710	70	Jerry Clegg
217	San Juan Mountains, Colorado (See pg. 81)	Aug. 13-23		740	70	David Horsley
218	Navajoland, Canyon de Chelly, Arizona	Aug. 17-24		380*	35	c/o Patty Boyle
219	Three Sisters Llama Trek, Cascade Range, OR	Sept. 9-14		450	35	T&T Landis
	* = Two parents and one child = $1100; Each Additional child, $260					
SERVICE TRIPS						
220	•Lost Creek Wilderness, Pike Forest, Colorado	July 18-28		70	35	Jim Bock
225	•Joyce Kilmer, Slickrock Wilderness, North Carolina	June 16-23		70	35	Larry Roberts
229	•Preston Peak, Klamath Forest, California	July 5-15		70	35	Ira Golub
231	•One-Mile Lake, Marble Mountain Wilderness, CA	July 10-20		70	35	Roy Bergstrom
235	•Targhee Tetons, Targhee Forest, Idaho	July 18-28		70	35	Larry Moore
236	•Beginning Campers' Trail Maintenance, Sierra	July 28-Aug. 5		70	35	Simon/Liddle
238	•Two Mouth Lakes, Panhandle Forest, Idaho	July 31-Aug. 10		70	35	Bruce Kingsley
241	•Teton Wilderness, Wyoming	Aug. 7-17		70	35	Muki Daniel
242	•Sierra Club's Own Trail Construction-I, Sierra	Aug. 9-19		70	35	Susan Liddle
245	•Hilton Lakes Basin, Sierra	Aug. 20-30		70	35	Shawn Benner
246	•Washakie Wilderness, Shoshone Forest, Wyoming	Aug. 20-30		70	35	Smith/Terry
247	•Sierra Club's Own Trail Construction-II, Sierra	Aug. 23-Sept. 2		70	35	Keith Proctor
249	•Cloud Peak Primitive Area, Wyoming	Aug. 28-Sept. 7		70	35	Ann Diamond
363	•Ozark Trail, Missouri	Oct. 7-13		70	35	Rick Rice
251	•Mt. Hood Plane Wreck Cleanup, Oregon	Aug. 19-29		70	35	Kelly Runyon
254	•Eagle Cap Wilderness, Oregon	Aug. 20-30		70	35	Tod Rubin

Trip Number	E = Educational Outing • = Leader Approval Required	Date	Trip Fee (Including Deposit)	Deposit	Leader
257	•Lower Salmon "Row-it-Yourself" Cleanup Trip, ID	Aug. 26-30	200	35	Bill Bankston
362	•Rogue River "Row-it-Yourself" Cleanup Trip, OR	Oct. 3-7	200	35	Kelly Runyon
WATER TRIPS					
Raft Trips					
260	Rogue River Raft Trip, Oregon	June 18-22	365	35	Lynn Dyche
262	Canyonlands Raft-Hike-Jeep Trip, Utah	June 15-25	1040	70	B. MacPherson
263E	John Day River "Row-it-Yourself," Oregon	June 17-21	380	35	John Griffiths
266	Hell's Canyon Paddle Trip, Snake River, Idaho	June 26-July 1	635	70	Chuck Fisk
267	Trinity River Paddle Trip, California	July 2-5	240	35	Mark Larson
268	Rogue River Raft Trip, Oregon	July 9-13	365	35	Harry Neal
269	Main Salmon Paddle Trip, Idaho	July 9-14	635	70	Jon Kangas
270	Grand Canyon Oar, Arizona	July 16-27	1220	70	Lynn Dyche
271	Rogue River Raft Trip, Oregon	July 30-Aug. 3	365	35	Ruth Dyche
272	Grand Canyon Oar, Arizona	Aug. 11-22	1220	70	Chuck Fisk
273	•Klamath River Paddle Trip, California	Aug. 12-17	345	35	Tony Strano
274	Tatshenshini/Alsek River Expedition, Alaska	Aug. 13-23	1580	70	Tris Coffin
276	Trinity River Paddle Trip, California	Aug. 21-24	240	35	Victor Monke
277	Chilcotin River Raft Trip, British Columbia, Canada	Aug. 24-29	605	70	Kurt Menning
Sailing Trips					
285	Sails, Whales, and Indians, British Columbia, Canada	July 17-26	1225	70	Gary Dillon
286	Maritimes Sailing Adventure I, Newfoundland Coast	Aug. 9-18	1100	70	Maggie Seeger
Canoe Trips					
295	•Trinity River, California	July 9-14	290	35	Sharon Cupp
296	•Rogue River, Oregon	July 16-21	270	35	Paul Barth
297	•The Wide Missouri, Montana	July 20-27	395	35	I&C Wild
298	•Trinity/Klamath Whitewater, California	Aug. 20-25	290	35	M&B Bricca
FOREIGN TRIPS					
820	Basque-Land Trek, Spain/France	July 18-31	1270	100	John Doering
825	Hiking in the Pyrenees	July 18-31	1110	100	Rosemary Stevens
832	•Inner Mongolia Bike Trek	Aug. 6-30	2640	100	Frances Colgan
840B	•Mountain Hiking in Norway	Aug. 10-23	1350	100	Jim Watters
845	From Lake Constance to the Rhine	Aug. 20-26	620	100	L. McClellan-Loots
847	From Lake Constance to the Rhine	Aug. 28-Sept. 3	620	100	L. McClellan-Loots
850	•Zanskar—The Hidden Kingdom, India	Aug. 25-Sept. 26	1315	100	Len Lewis
902	Mt. Anyemagen Trek, China	Oct. 1-31	TBA	100	Mike Brandt
905	•Jugal Himal Trek, Nepal	Oct. 8-Nov. 1	940	100	Serge Puchert
906	•Central China Bicycle Tour	Oct. 13-Nov. 2	1910	100	Patrick Colgan
910	•Sherpa Christmas Trek, Nepal	Dec. 22-Jan 12, 1985	745	100	Peter Owens
500	Cross-Country Skiing in the Austrian Tyrol	Jan. 13-27, 1985	910	100	A. Lass-Roth
505	Cradle Mountain and Frenchman's Cap, Tasmania	Jan. 31-Feb. 13, 1985	TBA	100	Jerry Clegg
510	In Quest of the Quetzal: Mexican Birds	Feb. 15-28, 1985	1425	100	Richard Taylor
515	Serengeti Wildlife Walking Safari, Tanzania	Feb. 16-Mar. 2, 1985	1920	100	Pete Nelson
520	Egypt—Sailing the Nile, Trekking the High Sinai	Feb/March, 1985	TBA	100	Ray Des Camp
525	•Kali Gandaki Trek, Nepal	Mar. 23-April 13, 1985	805	100	Mike Brandt
530	•Ganesh Himal Trek, Nepal	April 20-May 11, 1985	800	100	Kern Hildebrand

ERRATUM

Trip #217 (San Juan Mountains, Weminuche Wilderness, Colorado; August 13-23) was mistakenly listed in the January/February issue of *Sierra* as covering 60 miles in 11 moving days. The trip will actually contain four layover days with seven moving days. This promises to be a wonderful trip and it still has space available.

FOR MORE DETAILS ON OUTINGS

Outings are described more fully in trip supplements, which are available from the Outing Department. Trips vary in size and cost, and in the physical stamina and experience required. New members may have difficulty judging which trip is best suited to their own abilities and interests. Don't sign up for the wrong one! Ask for the trip supplement before you make your reservations, saving yourself the cost and inconvenience of changing or cancelling a reservation. The first five supplements are free. Please enclose 50 cents apiece for extras. Write or phone the trip leader if any further questions remain.

Clip coupon and mail to:
Sierra Club Outing Department
530 Bush Street, San Francisco, California 94108

Sierra Club Member Yes No

Send Supplements:

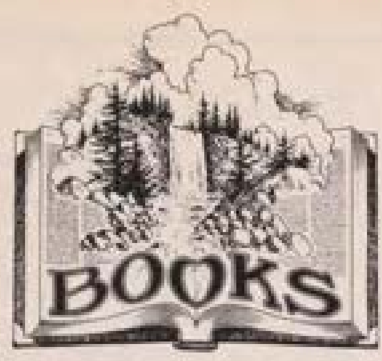
______ # ______ # ______ # ______ # ______
(BY TRIP NUMBER)

Name ____________________

ADDRESS ____________________

CITY ____________ STATE ______ ZIP ______

Enclosed is $________ for supplements requested over 5 at 50 cents each. Please allow 2-4 weeks for delivery.



Playing the Energy Game

ELLEN WINCHESTER

U.S. Energy Policy, by Don E. Kash and Robert W. Rycroft. University of Oklahoma Press, 1984. $19.95, cloth.

In the midst of daily announcements of the nation's recovery from recession, this book argues that the United States is as vulnerable to an interruption of oil imports as it was in 1973, when the Arab oil embargo touched off the rise in oil prices that has been so catastrophic to the world economy. It would seem we haven't learned a thing. In fact, as Don E. Kash and Robert W. Rycroft show, it's important to note that, while most of the actors on the energy-policy scene *did* learn a great deal over seven years, one retired film actor who didn't learn was elected President of the United States.

Kash and Rycroft set out to write a book analyzing America's failure to respond effectively to the oil crisis of 1973. To their surprise, their research revealed a nation that had stumbled along for seven years, led by three Presidents and four Congresses, widening the range of fuels to be taken seriously, broadening its perception of the public good, and admitting new players into policymaking circles—until, by 1980, it actually had a working energy policy.

That policy was a fragile balance between opposing views concerning, first, the need for centralized planning, and, second, the belief that market forces, unattended, would never fail to produce sufficient supply to meet demand. It was fragmented, chaotic, and incremental, but—in the authors' opinion—it would have achieved national energy security had Ronald Reagan not been catapulted into a position to reverse the entire process.

Kash and Rycroft see policymaking in the United States as taking place on two levels: resolution of issues at the presidential/congressional level—after consensus has been reached at lower levels—and problem-solving within semiautonomous systems. "In short," say the authors, "the United States has developed a system that allows vested interests to make a great deal of policy for themselves." The system depends on an evolving consensus among all interested parties, and hence on identifying and including them. Before 1973, energy policymaking had been organized around the five existing

fuel systems: oil, natural gas, coal, nuclear power, and electricity. After the embargo, when these systems proved incapable of managing demand, arranging trade-offs among conventional fuels, or developing new sources of supply, new players had to be included in the energy community.

The new players were environmentalists —without whose cooperation (one reads between the lines here) the best-laid plans of producers could go astray—and scientists, both in universities and in myriad consulting firms, selling their expertise to public and private agencies. In the governmental sector not only did the new federal agencies, with their well-funded laboratories strung across the nation, and congressional committees have their say, but so did the state regulatory agencies funded and indirectly created by federal energy legislation.

The new energy community modified the goals of abundance, cleanness, cheapness, and security that had been informally agreed upon prior to 1973. By 1980 abundance no longer meant a surplus that drove demand but rather a sufficiency for economic growth, arrived at by means of efficient use of energy. A whole string of laws regulating air quality, surface mining, nuclear power, and outer-continental-shelf development made clean energy an even more important goal than it had been in the early 1970s. Cheapness had been dropped from the list with the passage of the Natural Gas Policy Act in 1978 and the deregulation of oil. Energy efficiency had become basic to security, which also depended on the strategic petroleum reserve and standby rationing authority, a switch to coal by utilities, development of synfuels, and plentiful support for research and development. Achieving these goals depended on two new sources of energy—conservation and synthetic fuels—as well as on the conventional fuels the nation had consumed before 1973.

Agreement had also been reached on the policy instruments to be used in managing the nation's energy sources. The most effective of these, say the authors, was the deregulation of oil and gas. The decline in oil and gas reserves had been halted, and it was expected that rising prices would be paralleled by rising energy efficiency. Sanctions, including performance standards and taxes designed to influence choices, had proven politically unpopular, while tax subsidies (for energy conservation and solar energy) and large federal expenditures for R&D and synfuels had been generally accepted.

With energy participants, goals, and policy instruments largely agreed upon, by 1980 both the public and the new energy-policy community felt reasonably confident that they could predict the direction in which energy development was moving. Long-term projects could be initiated; investments could be made; careers could be dedicated and research planned.

Then came the Reagan radicals. They saw energy as no different from any other commodity. Problems of supply and demand could be solved in the marketplace. They believed that the only thing preventing the discovery of vast conventional energy resources (fossil and nuclear) was government control and manipulation. They did not believe in planning, to avoid scarcity or for any other reason. Not only did they not believe in the need for renewable resources or promoting energy efficiency, but they believed that too much emphasis on the latter had slowed the economy.

So far as goals were concerned, the new people in power were not worried about abundance, cleanness, or security. Regarding the first, getting government off the back of the energy industry was sure to maximize supplies; regarding the second, they paid lip service to the need for maintaining a better balance between energy needs and environmental values; regarding the last, they seemed to perceive no threat that a slowly accumulating "strategic petroleum reserve" and a free market could not take care of. Standby rationing authority ended in September 1981. The Reagan reliance on "self-

insurance" by the private sector and "volunteerism" by consumers, say Kash and Rycroft, "is regarded in many quarters as equivalent to an attitude of every man for himself in a crisis."

In keeping with their regressive theories of government, the Reagan radicals accelerated the deregulation of oil and promoted the removal of all gas price controls. They drastically cut the budgets of the regulatory agencies, tried to abolish the Department of Energy, and modified regulations wherever they could, using a cost/benefit test to determine the degree of application. (The fact that Congress successfully resisted the worst of the planned budget cuts for fossil fuels, conservation, and solar power, however, gives Kash and Rycroft a measure of hope for the future.)

Most environmentalists will emphatically agree with the authors that perhaps the heaviest blow struck by the radicals against the development of a stable national energy policy has been the reduction and dispersal of the energy-policy community. Participation in policymaking by the states will be particularly hard to rebuild. Scientists in and out of government have been forced to turn to other lines of research by a lack of funding. Even environmentalists, always spread very thin, have sometimes had to set priorities that place more easily attainable goals above protection against the hazards of energy development.

Conventional energy producers are now once again blessed with primary control of energy policy. Obliged to protect profits within a short timespan, they are unable to pinch-hit for absent government planning or provide for national security in the event of a cutoff in oil imports. They have been unable to increase or even maintain oil production. In order to maintain reserves and continue current levels of production (10.2 million barrels per day), the oil industry would have to discover a new Prudhoe Bay every three years. Deregulation and the magic of the market have yet to reveal resources in anything like that quantity. Fortunately, energy conservation has so far succeeded in reducing demand to match the decline in production. Unfortunately, the transportation industry uses half of the oil available in the United States, and no alternative is in sight. Neither is demand for the one fourth used to make oil-based products expected to shrink. In 1982, during a period of recession, this country was importing 5.1 million barrels of oil per day.

Kash and Rycroft are careful to acknowledge that the energy picture in 1983 was not all bleak: A gas shortage had been replaced by abundance; coal production had increased 40 percent over 1973; energy efficiency ranked as the most productive "new source" of energy since the embargo; growth in electrical demand had declined; and the surplus of peak-capacity electricity had almost doubled. But these gains were far from enough to reduce the authors' anxiety about what they consider to be a high-risk situation. They warn: "The conditions that led to the Arab oil embargo and the revolution in Iran have changed in no fundamental way. An oil disruption could occur tomorrow, next month, next year, or five years hence."

The basic remedy they call for is either a change in Reagan's thinking or his replacement by a President who will support clean energy and return to their definition of traditional energy policymaking, including "the integration into the energy-policy community of all the actors and interests who have demonstrated a continuing commitment to participation in energy policymaking."

Kash and Rycroft finish their book with specific recommendations to redress the damage done since 1980. Most of their proposals echo the hopes of environmental organizations. Four clearly do not. First, increasing funding for breeder-reactor research and development would not strike most environmentalists as a sound idea when problems of safeguards, reactor safety, and waste disposal continue to haunt the

High Adventure You Can Afford To Take

Paddle like the wind! Chinook is the *new* revolutionary open water/sea kayak. It goes where you want—with speed, style and room to spare!

In conjunction with pioneer sea kayak designer Lee Moyer of Pacific Water Sports in Seattle, Chinook was born. His knowledge and experience applied to a specially patented rotational molding process has produced an incredibly rugged kayak—engineered precisely for open water.

Best of all, Chinook is right for anyone's pocketbook—only $529.95 suggested retail

Chinook Features:

☐ Please send me more, free information.

Name

Address

City, State, Zip

AC-6

aquaterra

P.O. Box 1357 • Easley, SC • 29641

nation. Second, subsidizing a synfuels or natural-gas-conversion production capability of 250,000 to 5,000,000 barrels of liquid fuel per day (to be carried out by large energy companies) would add so much to the already formidable clout of those companies that it seems unlikely the kind of broadly based energy-policy community the authors call for would ever be allowed to develop. Third, it is questionable whether setting up a single bureau to manage energy and minerals within the Department of the Interior would improve energy management from the environmental point of view. The U.S. Geological Survey has for years served as a priceless brake on DOI folly. Fourth, letting the private sector select and lease tracts anywhere it chooses on the outer continental shelf may endanger marine habitat where the risks of oil development have not yet been evaluated.

Furthermore, any long-term supply program based on fossil fuels seems irresponsible at a time when two credible studies—one by the EPA, the other by the National Academy of Sciences—have warned of the "greenhouse effect," a carbon-dioxide-generated atmospheric warming that will be discernible before the end of this century and catastrophic before the end of the next one. The authors refer several times to the fact that no massive government programs to develop solar energy were authorized during the 1970s. It seems odd that their recommendations for the future go no further than increasing and extending solar tax credits and a sustained R&D program for photovoltaics. Research and development to produce transportable fuels from hydrogen, using solar heat, as well as new forms of vehicle propulsion would rank high on many environmentalists' wish lists.

On the whole, however, *U.S. Energy Policy* is a very useful book, both for its analysis of Reagan's extremism and for its factual content. Its survey of energy resources, history of energy policy, and review of relevant legislation bring together information that can be found elsewhere only in dispersed sources. Its analysis of the energy-policy process and its categorization of players creates order out of a wildly chaotic scene. A great deal of complex history has been reduced to 313 pages, exposing in an orderly fashion the nation's vulnerability to foreign manipulation of energy supplies. For this, a responsible reader must give thanks.

Ellen Winchester chairs the Sierra Club's National Energy Committee.

Grazing on Public Lands

PETER WILD

Sacred Cows at the Public Trough, by Denzel and Nancy Ferguson. Maverick Publications (Drawer 5007, Bend, OR 97708), 1983. $8.95, paper.

Denzel and Nancy Ferguson offer a book analyzing the impact of cattle ranching on the vast public lands of the western United States. Their study is well-reasoned and based on the work of scientific authorities in the field. But as it turns out, *Sacred Cows* is about much more than the fine points of carrying capacity, animal-unit months, and the other notions one hears tossed about wherever cattlemen gather. In the overview, this book is about the combination of politics and cultural values that has allowed a nation to sit back (and often nod its approval) as a relative handful of profiteers fill their own pockets while ruining millions of acres of our heritage.

The Fergusons are not much concerned

For touring or commuting, Bell's deluxe TourLite™ and Biker II™ beat the rigors of the road and look good doing it.

Their tough outer shell and polystyrene liner combine to resist impact, while air scoops keep you cool.

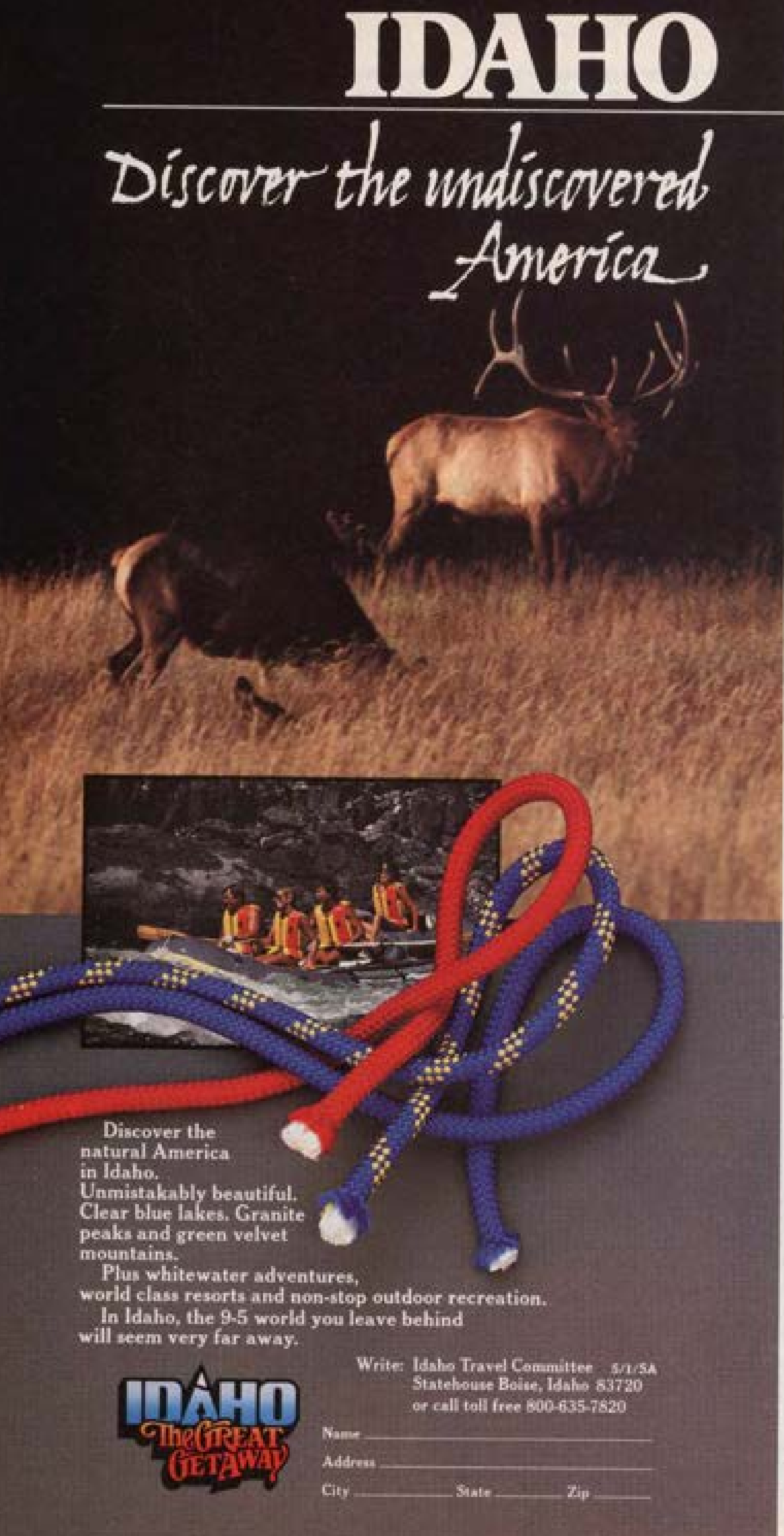
WORN BY THE BEST

Bell's TourLite with adjustable visor and the Biker II go the distance with style and performance.

That's why more cyclists wear Bell than any other brand.

© 1984, Bell Helmets, Inc., 15301 Shoemaker Ave., Norwalk, CA 90650

U.S. Cycling Team
OFFICIAL SUPPLIER



with the family rancher running a few cows on his place and desperately trying to make ends meet. Along with many small-scale agricultural entrepreneurs across the nation, he's being squeezed out of a market geared to mass production and high-stakes corporate financing. Rather, the authors focus on the ecological impact that occurs as cattle by the increasing thousands graze across fragile and deteriorating public lands, and on the circumstances that have permitted a bad situation to become steadily worse. In conclusion, they offer hope for change.

First some myth-destroying facts about beef and the West. Only 3 percent of the nation's beef comes from publicly owned rangeland. That amounts to less than two pounds of beef per person per year. Yet producing that nearly insignificant percentage of red meat in the average person's diet requires that stockmen monopolize an empire of 361 million federally owned acres. Such a scheme is not only grossly inefficient, it's expensive. The government subsidizes the ranchers, who pay relatively small fees for their grazing privileges. (For instance, in Arizona the Bureau of Land Management recently collected $94,500 from the holders of grazing permits in the Kingman area. In turn the BLM spent $366,500 to build roads and fences and improve water supplies on those grazing lands. The taxpayers made up the difference.) The ranchers, so boastful of their independence, in reality are on the public dole.

But that's not the worst of it. Dollars, after all, are replaceable. The land is not.

And in the West most of the land is arid, especially vulnerable to ecological abuses. More than a hundred years ago, John Muir observed domestic sheep dotting the Sierra Nevada and called them "hooved locusts." One might think of cows as far bigger locusts, with far bigger feet and mouths. They destroy wildlife habitat, particularly for elk, bighorn sheep, and upland game birds. They muddy trout streams, and their wastes pollute rivers. Because of overgrazing, millions of tons of rich and irreplaceable topsoil wash away each year while water tables fall. To a great extent this desertification of the West began after the Civil War, with the introduction of large cattle herds. The process continues today. As the Fergusons say, the West is "committing regional suicide" in order to produce that 3 percent of the nation's beef.

Viewed objectively, all this points to one unavoidable conclusion: The arid West is no place to raise cattle. The economics alone bear this out. Contrary to the common public image, our most-productive beef areas are in the eastern states, where rainfall is plentiful, the grass grows deep, and the cattle business flourishes without the props

that shore up the industry in the West. The authors note one student of the present situation who calculates that "the nation could produce more beef on road rights-of-way in the eastern states than is being produced on all the public rangelands in the West." That may sound like hyperbole unless one realizes that Alabama (for example) enjoys a level of cattle-raising productivity some 91 times that of Nevada.

One naturally wonders not only how this disparity began in the first place but how it manages to continue in our day of restless taxpayers. The Fergusons' answer to these questions is a brief but telling history of the cattle industry. Among the first permanent settlers of the West, stockmen quickly consolidated their holdings, driving out small landowners—with hired gunmen if necessary—and carving out huge cattle kingdoms. Such corporate interests, often funded by wealthy easterners and foreigners, soon not only dominated the local economies but through their financial clout extended their influence to Congress.

Hence through political power evolved the special privileges that cattle interests jealously guard to this day. The authors tell of one multimillionaire rancher known as "the king of trespassers." Over the years, he's been cited 89 times for illegally grazing cattle on public lands in Nevada, California, and Montana. Yet he quipped to a judge, "I feel I have been and am being picked on," and he's gone all but scot-free. For while one agency of the government attempts to prosecute the lawbreakers, others are held in the cattlemen's thrall. The U.S. Forest Service and the beleaguered BLM, for example, recognize that their lands are overgrazed. But they must step lightly, knowing from past experience that enforcing the law may well bring down vengeance upon them in the form of slashed budgets.

Times, thank goodness, are changing. For one thing, a better-educated and health-conscious public is eating less beef. Cholesterol-fearing Americans are recognizing how gluttonous it is to eat meat. Ranchers may say that they are helping to feed a hungry world, but their claims have a hollow ring. Our exported beef goes to the rich, not to the poor, in the Third World countries. And as for allocation of resources, an acre planted in cereals yields five times more protein than it would if given over to livestock, and fifteen times more protein than if it grew leafy vegetables.

The subsidy-sustaining romantic myth of the cowboy is likewise wearing thin. Not only are today's increasingly outdoors-oriented voters chuckling at the anachronistic image of the sixgun-toting westerner, but they're growing weary of having to chase defecating cows out of their own public

Sports Pouch kept everything dry even when we weren't…

When I fell overboard, Sports Pouch helped me keep my head above water, as well as my valuables safe…

Worked like a charm on a week long camping and canoe trip, everything was safe and accessible…

Sports Pouch sure was a success—especially after our canoe dumped four times.

Sports Pouch is 100% waterproof, shock-resistant and because it inflates … it floats.

Ruggedly constructed, yet lightweight, the 10 and 20 lb. capacity shoulder packs are available in two colors, high visibility yellow and camouflage for hunters. The new Fanny Pack is available in yellow only.

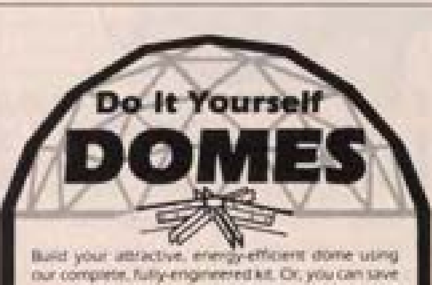
Look for Sports Pouch and Fanny Pack at sporting goods and camera stores.

SPORTS POUCH®
hangs tough

sima® Beyond the Usual.

Sima Products Corp., 4001 W. Devon Ave., Chicago, IL 60646 U.S.A.

*The above quotations are from actual Sports Pouch enthusiasts. Names and addresses available upon request.
© 1984 Sports Pouch is a registered trademark of Sima Products Corporation.



Speak French like a diplomat!®

What sort of people need to learn a foreign language as quickly and effectively as possible? *Foreign service personnel*, that's who.

Now you can learn to speak French just as these diplomatic personnel do—with the Foreign Service Institute's Basic French Course.

The U.S. Department of State has spent thousands of dollars developing this course. It's by far *the most effective way* to learn French at your own convenience and at your own pace.

The Basic French Course consists of a series of cassettes and an accompanying textbook. Simply follow the spoken and written instructions, listening and repeating. By the end of the course, you'll be learning and speaking entirely in French!

This course turns your cassette player into a "teaching machine." With its unique "pattern drill" learning method, you set your own pace—testing yourself, correcting errors, reinforcing accurate responses.

The FSI's Introductory Basic French Course comes in two parts, each shipped in handsome library binders. Part A introduces the simpler forms of the language and a basic vocabulary. Part B presents more complex structures and additional vocabulary. Order either, or save 10% by ordering both:

☐ **Basic French Part A.** 12 cassettes (15 hr.), and 194-p. text, $125.
☐ **Basic French, Part B.** 18 cassettes (25 hr.), and 290-p. text, $149.

(Conn. and N.Y. residents add sales tax.)

TO ORDER BY PHONE, PLEASE CALL TOLL-FREE NUMBER: **1-800-243-1234.**

To order by mail, clip this ad and send with your name and address, and a check or money order — or charge to your credit card (VISA, MasterCard, AmEx, Diners) by enclosing card number, expiration date, and your signature.

The Foreign Service Institute's French course is unconditionally guaranteed. Try it for three weeks. If you're not convinced it's the fastest, easiest, most painless way to learn French, return it and we'll refund every penny you paid. Order today!

112 courses in 35 other languages also available. Write for free catalog. Our 12th year.

Audio-Forum
Room 378
On-the-Green,
Guilford, CT 06437
(203) 453-9794

AUDIO-FORUM®

Or visit our New York sales office: 145 E. 49th St., New York, N.Y. 10017 (212)753-1783

BANANA REPUBLIC
TRAVEL & SAFARI CLOTHING CO.

Khaki

4-16 W
29-40 M

100% Cotton Canvas
CARGO Shorts

No fewer than six deep, roomy pockets—two in the back, four in the front. By all means, fill them with rocks or shells—the tough cotton canvas can take it. **$25**

SEND $1 FOR CATALOGUE
Year's Subscription
OPEN 7 DAYS A WEEK
San Francisco • Beverly Hills and other California locations
Now open — Orange County, Downtown San Francisco

ORDER TOLL-FREE 800-527-5200

campgrounds. The BLM lavishes 10 times more of its budget on stockmen than it spends on wildlife, and that's beginning to rankle. In brief, as the Fergusons note, sacred cows are becoming less sacred to most Americans. To put it in purely political terms, the change of heart is having mounting impact on Congress. Americans are demanding to know why their tax dollars should continue to support an environmentally destructive industry.

Zoologist Denzel Ferguson and his free-lance-writer wife, Nancy, first encountered the cattle industry's gross intrusions on our natural heritage when they were managing a field station at Oregon's Malheur National Wildlife Refuge. Alarmed by what they saw, they devoted a decade to further research on the situation throughout the West. *Sacred Cows at the Public Trough* is published by a small press, but it deserves to be widely read among conservationists.

Peter Wild is on the English faculty at the University of Arizona, Tucson. His review of Ann Zwinger's A Desert Country Near the Sea *appeared in the March/April 1984 issue of* Sierra.

Wilderness Metropolis

JOHN PATRICK JEFFRIES

Tahoe: An Environmental History, by Douglas H. Strong. University of Nebraska Press, 1984. $16.95, cloth.

TAHOE. The lovely Washoe Indian word brings to mind the shimmering, deep-blue lake, steep, pine-studded granite mountains, brilliant air, quiet, peace. It also conjures up images of high-rise casino-hotels, snarled traffic, a crazy quilt of condominiums and chalets, ski lifts, stores.

The two images of Tahoe represent opposing views of how the region should be used, and the battleground for this crucial decision-making process—aspects of which are ongoing—is the focus of Douglas Strong's new book. A history professor at California State University, San Diego, Strong presents an articulate, thoroughly researched account of the Tahoe Basin's development as a hodgepodge of scenic wonders and irksome blight.

After describing the lay of the land, Strong traces the activities of all who have touched Tahoe—miners, loggers, ranchers, gamblers, real-estate speculators, environmentalists, and politicians. His narrative is permeated by a sense of irony, for Strong

Make A Gift Earn Income Avoid Taxes

You can do all of this through the Pooled Income Fund of The Sierra Club Foundation or Sierra Club Legal Defense Fund. Here's how it works:

- Your contribution, generally $10,000 or more, is placed in the Pooled Fund with similar gifts from other donors. You receive shares or units of the Fund based on the fair market value of the gift relative to all other funds in the Pool.
- All earnings of the Pool during the year are paid out to donors and/or their beneficiaries during that same year on the basis of units held by each.
- Appreciation of gift assets is not subject to capital gains taxation.
- You become entitled to an immediate charitable deduction from income tax.
- Because the assets are removed from your estate, liability for estate tax is reduced.
- At the end of the income beneficiary's lifetime, the units involved are valued and that amount removed from the Pool to be used as you have specified.
- Make an investment in the future of the Sierra Club "family" of organizations!

The Planned Giving Program assists Sierra Club members and friends in creating charitable bequests and life income trusts. These gift techniques offer special income and tax advantages to donors and their beneficiaries, while helping ensure the future strength of the Sierra Club "family" of organizations. For more information, please contact:

Sarah Beebe Stafford
Director of Planned Giving
530 Bush Street
San Francisco, CA 94108
(415/398-8156 or 981-8634)

PLANNED GIVING PROGRAM

Sierra Club Legal Defense Fund, Inc.
The Sierra Club Foundation

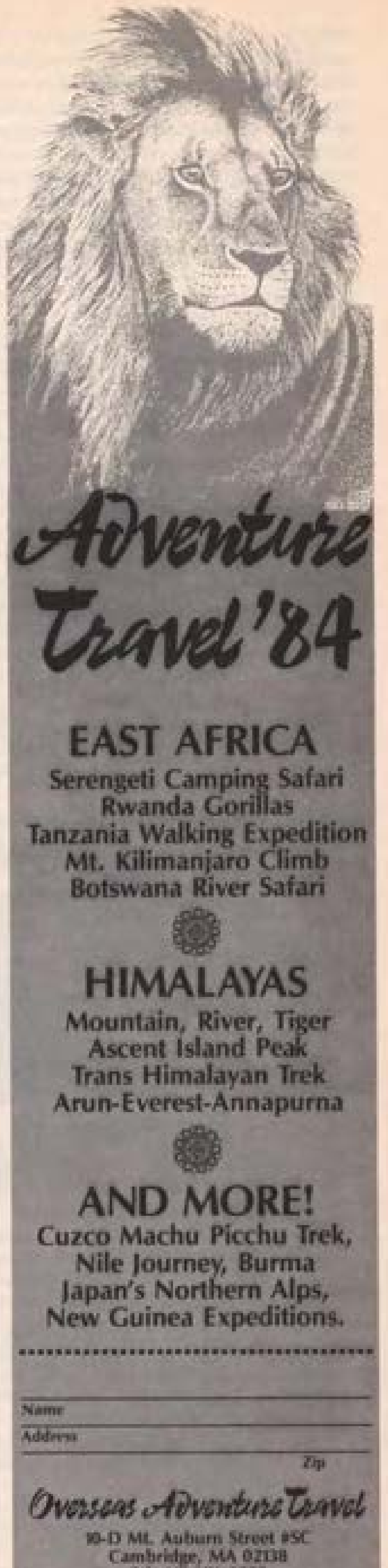
recognizes that Tahoe's beauty has been in large measure its undoing, and that events and people far outside the region's boundaries have helped shape its fate.

A major part of Strong's history concerns water quality, the source of Tahoe's fame. For nearly a century the lake's size (21 miles long by 12 miles wide) and depth (1,645 feet) allowed the water to remain brilliantly blue and clear. But erosion caused by logging, dredging, and commercal development has produced excessive sediment runoff, leading to accelerated algae bloom that could turn the lake green in as little as 40 years. (In just the past 15 years the lake's clarity has decreased by 25 percent.)

The Tahoe Regional Planning Agency (TRPA), organized in its present form in 1980, recently produced a master plan to coordinate growth in the basin over the next 20 years. Adopted in August 1983, the plan will permit moderate tourist-related development and new housing, but under restrictions governed by environmental thresholds established in 1982. This spring, pro-environment and prodevelopment board members temporarily set aside the issue of development of sensitive lands, breaking a months-long deadlock so that the overall plan might be put into effect. This important issue must be resolved by January 1985, however. The move renders moot federal lawsuits by the city of South Lake Tahoe and the Tahoe Sierra Preservation Council (an association of private landowners) intended to settle the issue.

As this book makes abundantly clear, Tahoe is at a crossroads. Strong notes that there is "still no consensus on who should decide the future of the Tahoe Basin or what the future should be." The past has been marred by missed opportunities and rampant opportunism; numerous proposals to create a national park, a national lakeshore, or a national recreation area have all been defeated by short-term local interests, stubborn mistrust among "cooperating" groups, Nevada's powerful gaming industry, and the sheer refusal of many to acknowledge the obvious problems associated with traffic, air pollution, and other aspects of urban encroachment upon the wilderness.

Though Tahoe's future remains in doubt, Strong believes there is reason to be hopeful. Among several positive developments he cites, more than 72 percent of the basin is now in public ownership (though most of the prized—and environmentally critical—miles of shoreline remain in private hands). The biggest landholder is the Forest Service, which under the Burton-Santini Act of 1980 is buying more land and successfully engineering watershed-management projects. Despite the TRPA master plan's provisions for moderate growth, no significant new



building is expected to come for several years. California's Tahoe Bond Act will provide $85 million to purchase and protect sensitive lands; Nevada's A.B. 534 (on this November's ballot) could raise $10 million for the same purpose.

If these and other efforts fail to improve the air, water, and scenic qualities of the basin, Strong suggests, the stage may be set for conclusive intervention by the federal government. Ironically, when the federal government has gotten involved in Tahoe in the past (however reluctantly), it has become an unwitting contributor to the region's decline. For instance, past EPA grants for much-needed sewage projects increased the basin's carrying capacity, leading to unintended new growth. Furthermore, the effectiveness of any involvement by the federal government, as Strong points out, "would depend on adequate funding, political acceptability, cooperation in pursuit of goals, and administrative skill." This seems unlikely, given the history of local insensitivity to the area's long-term problems, the prodevelopment bent of current governors Deukmejian and List (who control appointments to the TRPA board), and the nature of the Reagan administration.

Tahoe as a pristine wilderness is finished forever. But Tahoe as the fastest-growing metropolis in the West is finished as well. To what degree it evolves as a dual wilderness/metropolis remains to be seen. Strong's history is valuable to our understanding of how this duality came to be.

John Patrick Jeffries is a freelance writer in the San Francisco Bay Area. His "The New Alchemy of Photovoltaics" appeared in the November/December 1983 Sierra.

Notes From the Tropics

HARRY MIDDLETON

Naturalist on a Tropical Farm, by Alexander F. Skutch; illustrations by Dana Gardner. University of California Press, 1981. $7.95, paper; $18.95, cloth.

Nature Through Tropical Windows, by Alexander F. Skutch; illustrations by Dana Gardner. University of California Press, 1983. $19.95, cloth.

These are luxuriant books, the words soaked with Skutch's passion for the tropical forests of South America and their incredibly rich avifauna. No naturalist since W. H. Hudson has given us such a telling portrait of South America's grand and delicate—and increasingly endangered—wildlife and wilderness.

Skutch traveled about the South American outback for more than a decade, finding lodgings and small jobs where he could, studying and observing the absorbing wildlife and wilderness about him. Then, in the early 1940s, he found what he had been looking for: the good place, a place where he could finally settle down. It was a handsome piece of land in the valley of El General in southern Costa Rica, nine degrees from the Equator. Here he would live the life he wanted to live. He "wished to study living things, especially birds, to reside among them, and to live in harmony with them."

For nearly 40 years Skutch has lived on his tropical farm, the biologist more at home in the field than in the laboratory, more interested in the living specimen than in the dead one. He has lived at the edge of his beloved tropical forest quietly, steadfastly preserving his land while most of the forest surrounding it has fallen to the chainsaw and the bulldozer.

Skutch's piece of tropical forest remains wild, home for guans, tinamous, quail, trogons, toucans, hummingbirds, antbirds, woodpeckers and woodcreepers, manakins, flycatchers, cotingas, tanagers, honey-

NOW YOU CAN PUSH THE BUTTON TO STOP A NUCLEAR WAR.

They have their hotline. Now we have ours. Call toll-free and order your *Nuclear War Prevention Manual*, the detailed guide to nuclear war and everything you can do to stop it. It might just be the most important phone call you ever made. Made possible by the Campaign Against Nuclear War and its affiliated organizations. $5 suggested donation.

THE NUCLEAR HOTLINE
800-528-6050 EXT. 99

Public Media Center

creepers, finches, and so many more. Every detail, no matter how seemingly small or unimportant, is of interest to Skutch. In a series of short chapters he outlines the flow of the tropical year, from the mild weather of January to the climax of the rainy season in October, and the months of drought between. Month by month, season by season, Skutch takes the pulse of the rain forest, the moving days of life from the fruiting of the plants and flowers to the nesting and migration of the birds.

In what may prove a controversial chapter, Skutch takes on the notion of good and evil actually existing in nature. Because good and evil are human concepts, it is rather hard to force them on the natural world, just as it is impossible to force the natural world to live by mankind's rules and laws. Even so, Skutch's argument is thoughtful and earnest, if not totally convincing. Photosynthesis is "the basic good of the living world," writes Skutch, "upon which all its constructive processes, its beauty, and its joy depend." On the other hand, predation, says Skutch, is "the basic evil," the cause of most of the ills that afflict the world. Nature, though, knows no good or evil (as we understand them), and therefore bears no guilt, it seems to me, for either the world's woes or man's. In the forest there is no good or evil, no right or wrong—only life, ongoing and urgent, of which photosynthesis and predation are but two equal, even complementary, elements.

Nature Through Tropical Windows is just that, a gathering of wondrous views, a series of intimate sketches gathered by Skutch mostly from observations made close to home, through windows and doorways. We are on hand as southern house-wren juveniles feed siblings from another brood; we watch the nesting behavior of banaquits; we observe as shy blue-and-white swallows raise their young beneath the roof eaves of the farmhouse. There is a wonderful essay on the small and large in nature—describing how the small are more complicated and better-equipped for life than nature's giants. Another excellent chapter is "The Naturalist's Progress," a warm and glowing portrait of the growth of a naturalist from mere collector of the odd and beautiful to a student "of the endless diversity of creation, of the intricate interactions among its myriad forms, of the startling contrasts between supreme beauty and appalling ugliness, between tender love and violent rage, between beneficent growth and destructive fury, that this baffling world presents. He wishes to know [why] he has been thrust into its midst, what ultimate significance is to be found in his presence here, to what end the whole vast, confusing pageant is moving."

As I said, these are luxuriant books, written by a man whose eye is as keen as Thoreau's and whose spirit is as large and kind; a man deeply committed to the Earth and every life upon it, who from his home at the edge of the rain forest sees and feels and lives the Earth's own harmony, and passes the good news on to us all.

Harry Middleton is a frequent contributor to Sierra.

Two Battles Recalled

TOM TURNER

Mineral King: Public Concern With Governmental Policy, by John L. Harper (P.O. Box 1046, Arcata, CA 95521), 1982. $9.25 (postpaid), paper.

The Fight to Save the Redwoods, by Susan R. Schrepfer. University of Wisconsin Press, 1983. $22.50, cloth.

One of the truisms of environmental dispute has it that while our victories are temporary, our defeats are permanent. There may be exceptions to this

Built with Pride Use with Confidence

MSR Fuel Bottle

Collapsible

Stable leg configuration

Fits in handy bag

The MSR Firefly Stove is uniquely designed to give you what you need in a backpacking and climbing stove: compactness, light weight and dependability. Sturdy, non-rusting stainless steel, brass and aluminum are the materials used in the durable Firefly, that features a flexible, insulated fuel line. Pump and storage bottle become the fuel tank. Fully adjustable from roar to simmer, it burns white gas, and has an efficient windscreen and stable leg configuration. The optional hanging system safely suspends the Firefly for greater versatility.
Wt.: 15 oz. Folded size: 2¼" x 6" x 4¼."
Field maintainable.

BUILT WITH PRIDE
MSR
Use With Confidence

P.O. Box 3978, Terminal Station
Seattle, WA 98124 USA
(206) 624-8573

WHALES - TOTUMS
BALD EAGLES

Join **Jack Parsons**
World Traveler & Photographer

10 Days - Vancouver Island
Aug. 17-27, 1984 $1789

For information call or write:
Travel Advisors
56 N. Santa Cruz Ave.
Los Gatos, CA 95030
(408) 354-6531

rule, but it is largely the case that once a battle for control over a piece of land is lost to developers, that ground cannot be regained.

Here are two books that illustrate the point nicely. Both are skillful, articulate case histories of epochal environmental battles. Both take up the ins and outs of environmental politics. And both will find places in environmental curricula. Where they differ markedly is at the beginning, and comparing them makes for a fascinating analysis of the course of conservation history.

The subject matter of these books is remarkably similar. Both conflicts inspired long-running political battles. Both preoccupied the Sierra Club for long periods of its history. Both pitted commercial interests against the interests of wilderness lovers, and both were resolved, in conservationists' favor, by Congress.

But there was an essential difference between these fights. By the time the Save the Redwoods campaign got under way, nearly all the coast redwoods were either gone or in private ownership. Mineral King, on the other hand, was owned by the public (the Forest Service, in this case), an enclave surrounded on three sides by Sequoia National Park. At Mineral King, conservationists started in a position of power; in the redwoods, the fight was to regain a paradise sold.

Mineral King is a small valley lying at about 7,000 feet on the west side of the Sierra Nevada, south of Yosemite. It was visited at least once by a Sierra Club High Trip in the company of John Muir (in 1908). The Sierra Club chose to concede Mineral King to the Forest Service—with all the obvious risk that concession entailed—as a strategic move during negotiations over the boundaries of the proposed Sequoia National Park. The area was designated a game refuge, part of Sequoia National Forest.

Annexing Mineral King to Sequoia thereafter became something of a priority for the Sierra Club, although the effort not only to annex but to protect the valley did not become urgent until the 1960s. That was when the recreation arm of Walt Disney Enterprises—with the active cooperation of the Forest Service—proposed a large ski development for the tiny valley. A battle royal ensued, involving Walt Disney, the Sierra Club, the Forest Service, a skiers' association, and many others. The long and involved legal battle over the valley went to the Supreme Court and then back down to lower federal courts before being resolved in the Club's favor. The story ended happily in 1978, when Mineral King was finally added to the national park.

In the redwoods, the battle was less a legal one than it was political and economic. The first redwoods to be saved were simply

SIERRA

Reader Service Reply Card

Circle the numbers that correspond to those listed on the opposite page.

Free brochures and catalogues

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32	33	34	35	36

Priced literature

37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60

Please print or type

1. Handling fee (Orders without handling fee cannot be processed) $ 1.00
2. Priced literature $______

Total Enclosed $______

Name ________________________

Address ________________________

City __________ State ________ Zip ________

Do not use after July 31, 1984 M/J1984

Make checks or money orders payable to *Sierra* Magazine

Send reply card with payment to:

Sierra Magazine
Reader Service Management Dept.
P.O. Box 375
Dalton, Massachusetts 01227-0375

HOW TO USE THIS FAST ACTION FORM

To receive information from an advertiser listed on the reader service page, circle the appropriate number on the reply card and enclose your check or money order made payable to *Sierra*. Orders without the handling fee of $1 cannot be processed. Don't forget your name and address. Allow six to eight weeks for delivery of most items.

Mail the reply card
and your remittance in an envelope to:

Sierra Magazine
Reader Service Management Department
P.O. Box 375
Dalton, Massachusetts 01227-0375

READER SERVICES

Sierra *provides a direct line of communication between our readers and advertisers. To receive information from a* **Sierra** *advertiser listed below, circle the appropriate number(s) on the reply card and mail the card and your check or money order (made payable to* **Sierra***) to* **Sierra** *Magazine, Reader Service Management Department, P. O. Box 375, Dalton, MA 01227-0375.*

Please allow six to eight weeks for delivery of most items. Although each advertiser has assured us that it will respond to each request, **Sierra** *is not responsible for any failure to do so.*

Free brochures and catalogues

1. **Achilles Inflatable Boats**
Send for free full-color inflatable-boat catalogue and our riverboat catalogue.
2. **Alaska Travel Adventures**
16-page catalogue of more than 20 trips, from luxury adventure cruises to rugged expeditions.
3. **Altra Sewing Kits**
Free catalogue and dealer list.
4. **Audio Forum**
Learn a foreign language on your own. Full-length courses in 36 languages. Send for free catalogue.
5. **Bell Helmets**
For information on Bell's complete helmet line, send for our free brochure.
6. **Cascade Outfitters**
48-page catalogue of whitewater rafts, kayaks, and accessories. All products personally tested and guaranteed.
7. **Company Store**
50% off quality down products, factory direct. We're America's down experts. Free spring catalogue.
8. **Countrywear**
Next to you, you'll love countrywear's colorful range of comfortable, practical clothes mostly in natural fibers.
9. **DuPont**
Send for brochure on the complete line of DuPont insulations perfect for camping and outdoor pleasures.
10. **Early Winters**
Test our unique outdoor equipment, activewear, and fascinating gifts. 30-day money-back guarantee.
11. **General Ecology**
Free brochure on First-Need® or SEA-GULL IV® drinking-water purification devices.
12. **Glasscraft**
Hand-sculpted glass wildlife and marine life figures by glass artisans in Colorado. Free catalogue.
13. **Himalaya Trekking**
Small-group treks focusing on cultures of Nepal, China/Tibet, Kashmir/Ladakh, Pakistan, Japan, and more.
14. **Hubbard Scientific Company**
Free full-color brochure describes and illustrates more than 200 framed (or unframed) raised-relief topographic maps.
15. **Kelty**
Send for our 1984 "Kelty in Death Valley" product catalog.
16. **Lone Mountain Ranch**
Family guest ranch and nordic-ski interpretive vacations in Yellowstone country. Free brochure.
17. **Long John Shirts**
23 colors and 8 different styles. Send for our free catalogue.
18. **Mansfield Plumbing Products**
Free 1984 color catalogue for all the camping-sanitation products you need.
19. **Mountain Travel**
Treks, outings, and expeditions in Nepal, China, Peru, Africa, Alaska. Free trip schedule.
20. **Overseas Adventure Travel**
Safaris, treks, expeditions: walking, camping, and river safaris in Tanzania, Botswana, Rwanda. Treks in Nepal and Peru.
21. **Pena Products**
Free brochure regarding our fully adjustable modular camera harness and multi-colored belt bags.
22. **Planned Giving Program**
Bequests and life-income trust provide tax and income benefits to Sierra Club organizations' supporters.
23. **Sima**
Send for a free "Traveling with a Camera" brochure and film shield spec sheet.
24. **Sima**
Send for a free sports pouch color pamphlet and sports pouch fanny pack spec sheet.
25. **St. Louis Priory**
Information available regarding educational and pastoral work as a monk within our Benedictine community.
26. **Therm-A-Rest**
Free brochure and dealer list.
27. **Trek Hawaii**
Send for Trek Hawaii's brochure on guided outdoor adventures to the neighbor islands.
28. **University of Nebraska Press**
Free catalogue of books.
29. **Wilderness Travel**
Wildlife, natural history, trekking, rafting, adventure, and cultural tours worldwide. Small groups, free color catalogue.
30. **Wind River**
Information on our complete line of hiking staffs.
31. **Yosemite Seminars**
Send for catalogue describing 46 Yosemite field classes sponsored by Yosemite History Association.

Priced literature

37. **Banana Republic**
Authentic, classic, and comfortable travel and safari clothing for men and women. Mostly natural fabrics. $1.
38. **Camp Trails**
A complete line of internal- and external-frame packs, daypacks, luggage. 24-page, 4-color catalogue. 50¢
39. **Earthwatch**
The most recent edition of *Earthwatch* magazine listing over 80 field research opportunities around the world. $2.
40. **Eureka! Tent**
1984 catalogue displays more than 30 tents for families, backpackers and mountaineers. 28 pages, 4-color. $1.
41. **Fabiano Shoe**
Brochure available: hiking, backpacking boots, trionic boots, action footwear, X-C touring. 50¢
42. **Folbot**
Complete line of folding and rigid touring kayaks, available at factory-direct prices. Catalogue $1.
43. **New England Log Homes**
New England Log Homes makes log-home living affordable, comfortable, stylish, and easy. Planning kit $6.
44. **Perception**
Send for full-color catalogue and information on "how to" and "where to" learn to kayak. $1.
45. **Sani-fem**
Solve those wilderness restroom problems with Sani-fem® P/S.™ Free information for cost of postage. 20¢
46. **White Pine**
Wintersilks catalogue of 100% pure knitted silk sportswear items. Many new exclusive designs. $1.

Escape . . .

With Folbot

Folding from $649
Rigid from $559
Kits from $329
Sailing rigs available
for all models.

- Explore streams, rivers lakes or sea coasts.
- Quiet, comfortable, easy paddling.
- Quality construction for years of trouble-free use.
- Much more stable than a canoe or kayak.
- Perfect for cruising, fishing, and family fun.

Affordable Quality — Factory Direct Price Since 1935

Send $1.00 for new 1984 color catalog (mailed First Class)

Folbot, Inc.
P.O. Box 70877, Dept. SRA 584
Charleston, SC 29405-0877

Name ______
Address ______
City ______ State ______ Zip ______

Get lots more for just a little more.

Gourmet foods for the outdoors that are good enough to eat at home. At your local dealers or send for free literature.

bought outright with donations collected by the Save-the-Redwoods League. Later, Congress was persuaded to use its powers of condemnation to wrest a few tracts of trees from their lumber-company owners, adding them to several state parks and creating Redwood National Park.

The two authors approach their subjects rather differently. In discussing the redwoods, Susan Schrepfer (who has conducted oral-history interviews with many Sierra Club leaders) tells her story through the principal players involved. Indeed, she digresses often to write a political history of the conservation movement and its tactics, including analyses of the struggle between the Club and the League over strategy and over the places most worth saving.

At Mineral King there was no such intramural disagreement. Conservationists were united and thus could concentrate on the opposition: Disney, the Forest Service, and some skiers. John Harper, a geology professor at Humboldt State University in northern California, spends far less time on people than Schrepfer does, concentrating instead on the place and the legal battle that raged for more than a decade. He begins, Michenerlike, in prehistory, describing the carving-out of the valley by glaciers. He then moves quickly and nimbly to latter-day legal maneuverings, many of which he was party to as conservation chair of the Club's Kern-Kaweah Chapter in the early 1960s.

Both books end with conservationist victories, but the scope of those victories reinforces the point about trying to recover from past mistakes. Mineral King now proudly resides, in near-pristine condition, in Sequoia National Park. Redwood National Park, while a grand and lovely place, is but a shadow of what it might have been if there had been conservationists around to create a park before the land could be sold.

Tom Turner is the editor of Not Man Apart, *the monthly newspaper of Friends of the Earth.*

BRIEF REVIEWS

Management of Wilderness and Environmental Emergencies, edited by Paul S. Auerbach, M.D., and Edward C. Geehr, M.D. Macmillan, 1983. $68, cloth.

THIS BOOK SHOULD be in the library of every outing leader and every physician who treats "environmental emergencies." Primarily a medical reference, yet an easily readable work, the book offers current, in-depth discussions of a variety of illnesses and injuries that outdoor enthusiasts may sometime suffer. Twenty-one chapters cover topics such as high-altitude illness, hypothermia, skin injuries and

burns, bites of snakes, mammals, insects, and spiders, injuries from lightning—and much more. Toxic-mushroom ingestion and treatment, for example, are discussed, illustrated, and charted in detail for some 20 pages.

The authors, physicians at San Francisco General Hospital, are specialists in emergency medicine. Both are avid outdoorsmen and founding members of the Wilderness Medical Society. Careful to be clinically accurate and helpful to medical personnel, they write in a style easily accessible to and valuable for outing leaders, who must be aware of the sorts of incidents that might occur on their trips in specific regions and temperature ranges. This is a heavy book that gives the proverbial ounce of prevention and pound of cure.—*Frances Gendlin*

A Treasury of the Sierra Nevada, edited by Robert Leonard Reid. Wilderness Press, Berkeley, 1983. $14.95 cloth, $9.95 paper.

THIS COLLECTION of 70 articles, essays, and poems chronicles the history of California's grand mountains from 1827 to the present. Editor Robert Leonard Reid ("A Timber Baron's Lexicon," *Sierra*, January/February 1983) has gathered an impressive array of writings by "explorers, immigrants, poets, travelers, scientists, conservationists, innkeepers, and mountain climbers." Articles by Bret Harte, Mark Twain, and Jack London, and poetry by Walt Whitman, Kenneth Rexroth, and Gary Snyder present us with a wide range of perspectives. John Muir, Joseph Le Conte, and David Brower are well represented, and historic photographs of the Sierra are included. Reid's introductory remarks to each selection are short and incisive, leaving the bulk of the work to the featured writers. The articles focus on the wonders, the dangers, and the sublime beauty of the Sierra Nevada, and make wonderful reading—whether on a mountain hillside or in an air-conditioned office building. —*M.C.M.*

John Muir Summering in the Sierra, edited by Robert Engberg. University of Wisconsin Press, 1984. $21.50 cloth, $12.95 paper.

THIS IS A collection of articles written by the pioneering naturalist for the San Francisco *Evening Bulletin* in 1874 and 1875. The articles reveal to us a character as fresh and unspoiled as the land Muir explored.

In the course of his wanderings we hear Muir grow from a student of the wilderness to its professor and protector. In these formative years the author expressed himself as an inexhaustible champion of the wild and untamed who finds that "civilization, at least at this stage of the play, is strained and unnatural."—*M.C.M.* □

L.L.Bean®

Chino Shorts (For Men and Women)

Comfortable, durable shorts for active sports or casual wear. Same high quality polyester/cotton twill as our Chino Pants. Fully cut with bar tacking at stress points. Two front pockets, two rear pockets. 1¼" belt loops. Washable. Colors: Tan. Navy. Lt. Blue. White. Green. Odd and even waist sizes: 26-40 (No 35, 37, 39). Inseams: 3" and 6".

Please Ship Postage Paid

____1938W 3" Chino Shorts @ **$11.50** Size____ Color____

____2889W 6" Chino Shorts @ **$12.50** Size____ Color____

□ Check Enclosed □ VISA □ MasterCard® □ American Express

Card No.____ Exp. Date____

□ **Send FREE Catalog** **100% Guarantee**

Name____
Address____
City____
State____ Zip____

L. L. Bean, Inc., 3826A Main St., Freeport, ME 04033

The Glass Artisan has captured the action of the shimmering flight of the hummingbird and you will too when you hang it in your window.

- INDIVIDUALLY HANDSCULPTURED
- SATISFACTION GUARANTEED Money back & return postage refunded.
- AN IDEAL GIFT

Order now by check, money order, or charge it with Visa/MC.

$6.95 each-$12.95 for 2-$35.95 for 6. Add $2.00 for shipping and handling.

SEND TO: GLASSCRAFT INC. Dept.S.
626 Moss Street, Golden, CO 80401

NAME____
ADDRESS____
CITY____ STATE____ ZIP____
Visa/MC#____ Exp. Date____

1984 ECOLOGY OUTINGS
Led by Expert Naturalists

□ COSTA RICA
□ BAJA, CALIF
□ GALAPAGOS
□ GALAPAGOS & ECUADOR
□ GALAPAGOS SCUBA DVRS
□ TINGO MARIA, TAMBOPATA, PARACAS, CUZCO & MACHU PICCHU
□ SOUTH AMERICA MYSTERIES & CONTRASTS
□ INCA TRAIL
□ PATAGONIA & TIERRA DEL FUEGO
□ KENYA & EGYPT
□ KENYA w. EGYPT OPTION
□ KENYA & TANZANIA
□ KENYA, TANZANIA & SEYCHELLES IS.
□ TANZANIA
□ ZAMBIA WALK
□ ZAMBIA & KENYA
□ ZAMBIA, BOTSWANA & ZIMBABWE
□ ZIMBABWE & VICTORIA FALLS
□ AUSTRALIA & NEW ZEALAND
□ NEW GUINEA

General Interest

□ BEST OF MEXICO
□ CARIBBEAN ROYAL CRUISE
□ HOLLAND TULIP FESTIVAL
□ MEDITERRANEAN CRUISE
□ ITALIAN HERITAGE
□ GREECE & GREEK IS.
□ SICILIAN ODYSSEY
□ FRANCE GOURMET CRUISE
□ JAPAN & THE ORIENT

Following trips available anytime:

□ COSTA RICA INDIVIDUALIZED
□ ECUADOR, TINALANDIA & QUITO
□ AMAZON REGION ABOARD FLOTEL
□ LIMA, CUZCO, & MACHU PICCHU
□ KENYA INDIVIDUALIZED SAFARI

HOLBROOK TRAVEL, INC.
We Offer You The World
3520 NW 13 Street
Gainesville, FL 32601
377-7111

NAME____
ADDRESS____
CITY____ STATE____ ZIP____

Forget-me-nots

NOM DE BLOOMS

Wildflower names are often as colorful as the blossoms themselves.

MARY LOU BURKET

WHEN DOES SPRING ARRIVE where you live? In many parts of the world, a wildflower that blooms at this time of year is called a Mayflower. But it's easy to be fooled by this or many another flower's name—for not only can a Mayflower bloom in April or June, but the Lily-of-the-Valley isn't a true lily, not all violets are purple-colored, and the flower called Belladonna (Italian for "beautiful lady") is really a plant with poisonous berries that is also known as Deadly Nightshade.

Wildflower names are made up by different people in different places at different times. The White Water-lily familiar to Americans is known by more than 240 names in English, Dutch, German, and French. Even when people manage to agree on a common name, it may refer to more than one plant. Our Bluebell is not the same as the Bluebell of Scotland, and neither of these is the same plant as the English Bluebell.

Harebell

Unlike the Latin names that scientists throughout the world use to identify species of plants precisely, these "folk" or "popular" names often tell us more about the people who dreamed them up than they do about the wildflowers themselves. For example, Pink Lady's Slipper sounds as though it must be especially attractive—but it's also called Old Goose and Camel's Foot by people who don't admire its looks. Who do you suppose first sent a loved one a bouquet of Forget-me-nots like the ones pictured on this page? Was it the same person who later sent a bunch of Touch-me-nots?

False Lady's Slipper

Many a wildflower got its name because someone thought it looked like an animal, or a part of an animal's body. There are flowers with names like Dragon's Mouth, Camel's Foot, Elephant Flower, Leopard Lily, Turkeybeard, Mule Ears, and Unicorn-root. Other wildflowers have been named because someone thought they resemble articles of clothing: Soldier's Cap is one of these, as are Skullcap and Shirt Buttons. Some wildflowers even have names that suggest clothing worn by animals. The names Frog-buttons, Squirrel's Shoes, and Cat's Breeches are the products of someone's long-ago imaginings.

Some wildflower names describe traits that can be detected by our senses. Flowers named for their smell include Stinking Willie and Skunk Cabbage. (This last one is often called Polecat Weed.) Some flowers are named for their sweet taste: Whoever named the Honeysuckle probably nibbled a blossom or two first. Other names describe traits that are hard for us to detect at all. The Dog's Tooth Violet,

Indian Paintbrush

Bleeding Heart

Monkey-flower

Avalanche Lily

Blazing Star

Fireweed in field of Horsetail

Skunk Cabbage

Indian Pipe

for example, doesn't look like a dog's tooth, and it isn't a true violet. (A relative of this flower, the Avalanche Lily, is pictured on this page.)

Fortunately, many wildflower names provide clues you can trust when you go hiking. The Swamp Candle's name really does tell you where it grows, and so does the California Poppy's. The Corn Cockle grows in fields of corn, and Meadowsweet grows in meadows. Dayflowers indeed bloom for only a day . . . sometimes for only a morning.

You will find *wort*, the Old English word for plant, as part of many wildflower names. Lungwort was once considered a cure for lung disease, and Liverwort a cure for an ailing liver. Other plants have had their real or imagined medical effects reflected in their names: The Headache Plant was expected to soothe an aching skull, while Rattlesnakeweed was said to protect a person from snakebite. What do you think Bee Balm should do? What about Boneset, Heal-all, King's-cure-all, Live-forever, Sneezewort, Self-heal, and Heartsease?

Few people today believe that these plants truly live up to the claims of their names, but the names continue to entertain us. Some have been handed down because they are fun to hear and say aloud: Duck Potato, Fuzzy-gussy, Bird-on-the-Wing, Merry-bells, Trillium, Chicory, Flower-of-an-Hour, Moss Phlox, Pearly Everlasting. Other wildflower names are like stories, reminding us of heroes such as Joe Pye, the Indian who used the Joe-Pye Weed to heal New England colonists hundreds of years ago. Still others—such as Fireweed, which takes root in burned-over places—commemorate recent events wherever they grow.

There are hundreds of attractive flowers with entertaining names. Your school librarian or science teacher will be happy to show you a book or two full of flower names and pictures. □

Mary Lou Burket is a freelance writer living in Minneapolis. Her children's pieces have appeared in Cricket, Highlights, *and* Cobblestone.

ANN WILLIAMS: KERN-KAWEAH'S ACTIVIST WRITER

BOB IRWIN

THERE SHE STOOD in the morning sun, a trim slip of a woman, clipboard in hand, in earnest conversation with Phil Berry, a member of the Sierra Club's Board of Directors. I had tracked Ann Williams down at last—to the mid-March meeting of the two California Regional Conservation Committees (RCCs) at a county camp in the hills outside San Luis Obispo.

I had been hoping for a chance to meet her for more than a year. (Two weeks earlier a bout with the flu had forced me to scratch a planned visit to her home in Bakersfield.) At breakfast that morning, although we had managed to sit across from one another at a narrow table, we could scarcely catch a word above the din of 70 other people all talking at once. We agreed to meet later, in some quieter spot.

I first came to "know" Ann Williams in the mid-1970s, when I found myself becoming a steady reader of her monthly column, "Midgebuzzings," in *The Roadrunner*, the Kern-Kaweah Chapter's newsletter. (Ann says the title of the column was inspired by Bambi, who in his maturity dismissed the midges' talk as unimportant—or nothing but midgebuzzings.) Out of the scores of chapter publications that came to me (and still do) as "The Observer" for *Sierra*, I would watch for *The Roadrunner* and turn at once to its last page. There, month after month, would be Ann's column: each one a gem of no more than 350 words, and each offering some fresh new insight into the natural world or the people around her. A given column might plumb the depths of human feelings of awe or compassion; or recall with humor some misadventure; or, when it was called for, breathe real fire. But whatever its theme, "Midgebuzzings" would never be boring. (A typically readable installment, reprinted from the April 1983 *Roadrunner*, appears on page 103 of this issue.)

In time I came to feel that others in the Sierra Club besides the 1,200 or so members

Kern-Kaweah Chapter activist Ann Williams is at home in the outdoors, but uses her indoor hours to turn out her thoughtful monthly column, "Midgebuzzings," for the chapter newsletter.

of her chapter should have the opportunity to become acquainted with this eloquent writer who deftly lets her readers see, feel, smell, and hear the wild beauty of the places she holds dear, and who now—only recently—has begun to take an active role in the fight to protect those remaining wild natural refuges.

Ann Williams's new role as an environmental activist became evident when I strolled across the sunny deck to where she and Phil Berry were talking. She had been telling him about a major environmental setback in Bakersfield: a proposal to build an enormous water-theme recreation park on 18 acres of old parkland in Hart Park. The enterprise, given the political climate of Kern County, seemed assured of approval. Ann asked Phil what, if anything, could now be done to stop the project.

She had asked the right person. Not only is Phil the Club's Vice-President for Conservation Law, but he also serves as the liaison between the Board of Directors and the chapters. Phil ticked off the steps that ought to be taken. First, find a lawyer, ideally a Club member willing to volunteer his or her services. Next, get copies of all pertinent records to see what (if any) use restrictions had ever been placed on the property in its successive transfers from private to state to county hands. If, indeed, the land is restricted to use as a public park, the final step, said Phil, would be either to get the county to reconsider or, if it wouldn't, to go to court.

Ann immediately went into action, but soon learned from a friendly legal "mole" that research had already uncovered no legal restrictions on the project. The effort now, she says, will aim for its mitigation: to shift the 700-car parking lot from a beautiful grove of trees to a treeless hilltop, and the center itself to a less sensitive location.

How did this gentle, sensitive woman—who for nine years was content to stick with her "Midgebuzzings"—happen to plunge into her new and unaccustomed role as an environmental activist? It was an impulse, Ann confided after we had settled down at a picnic table nearby. An impulse—possibly with some kind of a religious motivation—to "do something that has to be done."

Approaching 50, though she doesn't look it, Ann realizes that she can retire in less than five years if she so wishes. Although she enjoys teaching her high-school English classes, she also would enjoy not having to go over student papers night after night. But for the present, she told me, and even after she escapes, there can be no complete retirement from social obligation. For her it is a moral imperative to work in some constructive way against the "real horrors in the natural and human environment."

She said she has always felt an affection

"I am learning to live close to the lives of my friends without ever seeing them. No miles of any measurement can separate your soul from mine."
—John Muir

REMEMBERING.

The wilderness, the grace and freedom of a wild creature, the sparkling purity of a stream, the companionship of friends on the trail, the stars in stark clarity through a clear night's air.

Preserve these shared memories by making a gift to the Sierra Club or The Sierra Club Foundation in the name of a friend, relative or associate.

Many opportunities for memorials are available. A special conservation project, perhaps. A visible memorial. An endowment fund. A project of special interest to the individual being memorialized. These are only a few. Gifts may be restricted or unrestricted. Donations to the Foundation are tax-deductible—those to the Club are not deductible. Contact us for details on ways to provide a living memorial.

MEMORIALS

The Sierra Club Foundation
530 Bush Street
San Francisco, CA 94108
415/771-0690 Ex. 635

Wilderness Luxury

Your pleasure as our company is requested.

Come be our guest at historic Half Moon Bar Lodge on the Rogue River, set in the pristine Wild Rogue Wilderness. Relax in privacy—there's no road access to our 8-room lodge. Fish, swim, hike or enjoy the solitude by day, luxuriate in gourmet meals and a cedar sauna by night. Open May through November.

R.S.V.P. Mark Minnis, proprietor and Sierra Club member. Write or call for rates, brochure. Ask about discounts for Sierra Club members!

Half Moon Bar Lodge

Business office: 410 NW 'E' St., Grants Pass, OR 97526
(503) 476-4002

TROPICAL TRIPS

HIKING • CAMPING • MOUNTAINEERING
SNORKELING • "TOURISTING"

INTERESTING YEAR-ROUND CULTURAL AND EXPLORATION TRIPS TO:
HAWAII, MEXICO, CARIBBEAN, ECUADOR, PERU, BOLIVIA, CHILE.

CALL: (805) 254-2297

OR WRITE: PO BOX 55717, DEPT O, VALENCIA, CA 91355

★ BIG AND BEAUTIFUL 20 x 30 ENLARGEMENTS ★

ONLY $9.98 FROM COLOR NEGATIVES

Plus $2.00 Postage and Handling. From Slide Add $3.00 for Internegative - Custom Cropped and Spotted.

★DOUBLE PRINTS★
or
DOUBLE SIZE

5 x 7s FOR LESS THAN WHAT YOU WOULD NORMALLY PAY FOR REGULAR SIZE PRINTS.

DEVELOP AND PRINT
YOUR CHOICE
2 - 3½x5 or 1 - 5x7
AT TIME OF PROCESSING

12 EXP.* $2.99
15 EXP.* $3.99
24 EXP.* $5.99
36 EXP.* $7.99

*Add $1.00 for 1st Class Postage
*From any Kodak, Fuji, C-41 Print Films
AND FROM ANY KODAK 5247-5293-5294 FILMS

★FREE FILM OFFER★

Send in a roll of film for processing and we will send you a free 36 exp. roll of Eastman Kodak's versatile 5247 film that gives you your choice of slides, negatives and/or prints - all from one great Kodak film.

SAVE 50% AND MORE ON YOUR FILMS

UNILAB®
P.O. BOX 66929, AMF O'HARE, IL 60666
P.O. BOX 2736, PORTLAND, OR 97208
P.O. BOX 30730, JAMAICA, NY 11430
P.O. BOX 2075, WOODLAND HILLS, CA 91364
P.O. BOX 8888, WINNIPEG, MANITOBA, CANADA R3C3A4

Telephone 1-312-344-8821
"Years of Experience in Custom Printing"
We accept VISA, MasterCard, and Am. Express

☐ Please send additional information and prices.

Name ____________
Address ____________
City ____________
State ______ Zip ______
S-58

for people—even for the villains, she added. Consequently, she told me, "I've had to force myself to get into the activist business." And she's learning. She likes to speak in public now, finds herself comfortable talking to public officials, and is developing skills in her new adversary role.

I asked her what part organized religion had played in her outlook on life. She replied that churchgoing offers her a sense of community with others who share with her a feeling for humankind and a reverence for the unknown. Ann has found a similar sense of community in sharing experiences of nature or wilderness with Sierra Club people. She told me of the unspoken excitement of a weekend trip into the desert west of Death Valley early this past March: how five pairs of eyes scoured the landscape to discover its secrets, and how at night the five of them walked together in the hush of the desert beneath a dark dome studded with billions of stars.

Earlier in life, at the impressionable age of 13, Ann had experienced that same kind of mystical feeling of oneness with the world around and beyond her—but there was a difference. There was no one her age to share it with. Also, it lasted longer. It was a year-long idyll "submerged in real, unspoiled rural country." In 1947 her family moved from Bakersfield, at the southern end of California's great Central Valley, to Chico, near its northern end. Ann fondly

SIGHTINGS

The Florida Chapter's Loxahatchee Group participated for the fourth year in a cleanup of litter and debris from the Loxahatchee River, a popular canoeists' stream that runs through Jupiter, Fla. The group is also working with the state to replant riverine vegetation—primarily mangrove and cypress—destroyed by saltwater intrusion.

Fall in Montana

Offers a less crowded time to photograph and appreciate the Montana and Yellowstone wilderness and see big game in their prime.

- Comfortable Log Cabins
- Gourmet Food
- Guided Horseback Trips and Yellowstone Hikes
- Fly Fishing
- A Fall Experience for Non-Hunters
- Low Impact Horsepack Trips

Box 145, Big Sky, Montana 59716
(406) 995-4644

EARTHWATCH

"The curious are rewarded..."

Volunteers are needed to:

- Survey endangered crane populations in China's Zha Long Wetlands.
- Dive to record the feeding behavior of grey whales off the coast of British Columbia.
- Document social behavior among Borneo's Orangutans.
- Identify the effect of climatic change on Pacific Island bird species.

Over 80 expeditions around the world. Join us and help mobilize a team.

Two to three week projects. No special skills necessary.

EARTHWATCH
Box 127s
Belmont, MA 02178

Membership: $20/yr.
Full program information on request.

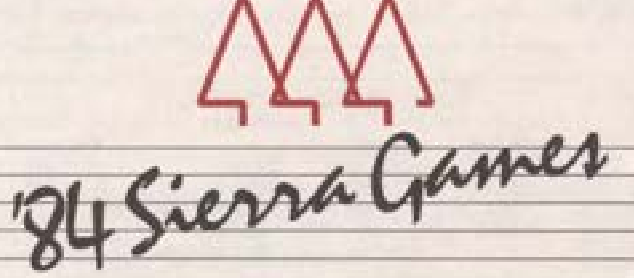
Phone: 617-489-3030

EARTHWATCH is a Non-profit Organization. All Expedition expenses are Tax-Deductible.

The Sierra Games represents a great opportunity for Chapters and Groups to increase their membership and their bank accounts.

When you recruit a new member, you're helping your Chapter and Group as well as yourself in the Sierra Games competition. There will be special rebates to Chapters and Groups for every new membership—dollars to help fund your special projects.

For your convenience, contest membership forms have been printed on the reverse side. For additional forms, contact your membership chair.



SIERRA CLUB . . . THE OFFICIAL CONSERVATION ORGANIZATION

MEMBERSHIP FORM

☐ *Yes, I want to join! Please enter a membership in the category checked below.*

New Member Name ______________________________

Address ______________________ Phone ______________

______________________________ Zip ______________

GIFT MEMBERSHIPS: If you are giving this membership as a gift, please enter your name and address below:

Donor Name ______________________________

Address ______________________ *Zip* ______________

GIFT MEMBERSHIP will be announced by a special gift card in your name.

☐ *Check here if you would like to be billed for renewal of this gift membership next year.*

Recommended By (optional) ______________________________

Membership No.: ____________

Address ______________________ Phone ______________

______________________________ Zip ______________

MEMBERSHIP CATEGORIES

	Individual	Joint	SPECIAL CATEGORIES	Individual	Joint
Regular	☐ *$ 29*	☐ *$ 33*	*Senior*	☐ *$15*	☐ *$19*
Supporting	☐ *$ 50*	☐ *$ 54*	*Student*	☐ *$15*	☐ *$19*
Contributing	☐ *$100*	☐ *$104*	*Spouse of Life Member (Annual Dues)*	☐ *$15*	
Life	☐ *$750*	*per person*			

All dues include subscription to Sierra ($4) and chapter publications ($1).

Sierra Club *Dept. H-814, P.O. Box 7959, San Francisco, CA 94120*

Residents of Canada, please remit in Canadian funds to:
#308 47 Colbourne Street, Toronto, Ontario, M5E 1E3 (Eastern Canada)
P.O. Box 202, Victoria, British Columbia, V8W 1K8 (Western Canada)

MEMBERSHIP FORM

☐ *Yes, I want to join! Please enter a membership in the category checked below.*

New Member Name ______________________________

Address ______________________ Phone ______________

______________________________ Zip ______________

GIFT MEMBERSHIPS: If you are giving this membership as a gift, please enter your name and address below:

Donor Name ______________________________

Address ______________________ *Zip* ______________

GIFT MEMBERSHIP will be announced by a special gift card in your name.

☐ *Check here if you would like to be billed for renewal of this gift membership next year.*

Recommended By (optional) ______________________________

Membership No.: ____________

Address ______________________ Phone ______________

______________________________ Zip ______________

MEMBERSHIP CATEGORIES

	Individual	Joint	SPECIAL CATEGORIES	Individual	Joint
Regular	☐ *$ 29*	☐ *$ 33*	*Senior*	☐ *$15*	☐ *$19*
Supporting	☐ *$ 50*	☐ *$ 54*	*Student*	☐ *$15*	☐ *$19*
Contributing	☐ *$100*	☐ *$104*	*Spouse of Life Member (Annual Dues)*	☐ *$15*	
Life	☐ *$750*	*per person*			

All dues include subscription to Sierra ($4) and chapter publications ($1).

Sierra Club *Dept. H-814, P.O. Box 7959, San Francisco, CA 94120*

Residents of Canada, please remit in Canadian funds to:
#308 47 Colbourne Street, Toronto, Ontario, M5E 1E3 (Eastern Canada)
P.O. Box 202, Victoria, British Columbia, V8W 1K8 (Western Canada)

SIERRA CLUB . . . THE OFFICIAL CONSERVATION ORGANIZATION

'84 Sierra Games

The greatest membership contest in Sierra Club history is about to begin . . . a contest of truly Olympian proportions with a goal of 10,000 new memberships.

It's a contest where everybody wins with great individual prizes as well as financial incentives for Groups and Chapters.

The contest begins May 1st and continues through September 3rd. But it's not too early to begin thinking about potential new members. Official contest membership forms have been inserted in this issue of *Sierra*. For additional forms, contact your membership chair.

- GRAND PRIZE* An all expense paid national outing for two plus all of the following prizes.
- 50 MEMBERSHIPS A signed and numbered, limited edition copy of *Alaska: Images of the Country* by Galen Rowell and John McPhee plus the prizes listed below.
- 25 MEMBERSHIPS A signed Doonesbury "Watt Cartoon" by Gary Trudeau plus the prize listed below.
- 5 MEMBERSHIPS A 100% Cotton Sierra Games T-Shirt.

* Restrictions apply

To insure that all contestants have an equal opportunity to win, memberships must be personally solicited by contestants. Staff/Volunteers who collect, administer and process membership requests may not include these in their contest totals.

American Lincoln Homes™

Build It Right ★ Do-It-Yourself.

Artist's rendering. Actual plans may vary.

Save Up To 35% On Your New Home

American Lincoln Homes, a leading manufacturer of solid-timber homes, offers you a complete line of traditional and contemporary energy efficient home packages in your choice of cedar, cypress, or eastern white pine. They are simple to construct following our illustrated construction guide and audio-visual program.

Save yourself as much as 35% in construction cost and build it yourself. To make it even easier, we offer nationwide financing. Call or write today for more information.

American Lincoln Homes™

Build It Right ★ Do-It-Yourself.

P.O. Box 669

Battleboro, NC 27809

National Toll-Free Number

1-800-334-5166

North Carolina Toll-Free Number

1-800-682-8127

Coupon: Please send me your new 80-page full color Planning Guide with over 50 illustrations and floor plans of ALH solid-timber homes. Enclosed is $9.95 for my copy.

Name: ______

Address: ______

City: ______ State: ______

Zip Code: ______ Phone: ( ) ______

MasterCard or Visa Number: ______

Expiration Date: ______ S 5/6 84

Authorized Signature: ______

recalls sitting for hours—on a crude seat she had built atop a wooden fence—and gazing out across Chico Creek, to the dark butte tops beyond and to the peaks of the northern Sierra in the far distance. But it was an experience she could share with no one. Adults wouldn't understand. So, yes, coming back to the present, Ann agreed that insofar as the Sierra Club encourages the sharing of unspoken excitement and wonder, it could well be considered a "religion."

Looking back, Ann feels she was fortunate to have been a child in the late 1930s and through the war years, when there were still unpaved-over meadows and woodsy places to roam in. Every summer her father would save up enough money for gas to take the family camping on the eastern slope of the Sierra, up from Big Pine. And while times were tough and there was much suffering, there was more trust in people, and less fear too. She wouldn't want to be a child growing up in today's world, she told me.

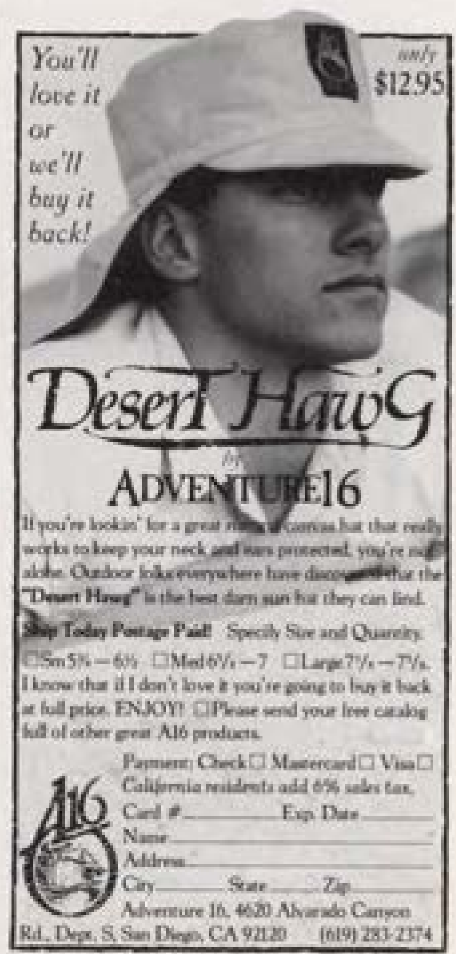
Ann graduated from Pomona College, southeast of Los Angeles, in the mid-1950s with a major in history and a minor in English. While there she met a blind student from India, Ved Mehta, who helped her to "see"—to make use of all of her senses to appreciate the world and the people around her. She said he was an amazing person who, though he was blind, spoke always in terms of visual images, so that for her the concept of vision was enlarged to include an inner dimension. He now does some writing for *The New Yorker*, she added.

After teaching lower grades in Long Beach, Calif., and then back home in Bakersfield, Ann switched to her present high-school job in 1961. She took a sabbatical in 1968-1969 to earn a master's in education and theology at Claremont College; her thesis was on Martin Buber, the unorthodox and influential Jewish religious philosopher.

During those two years, she said, she was on the road a lot and saw many things that set her to thinking. The simpler and cleaner world she had known was changing. She was repelled by the streams of RVs with their boats on top, dirt bikes in front, and trailers and/or little cars being pulled along behind. She began to wonder what it was their owners were seeking, what need they were trying to satisfy.

Then she saw a billboard with a picture of a huge dirtbike on it and the message SUZUKI CONQUERS BOREDOM. "I've been a lot of things in my life," Ann told me, "but I've never been bored." Here was something about American life that she was not tuned in to, "something very unpleasant that I should make myself learn more about."

Ann joined the Sierra Club in November 1969. Since then, she said, she has learned



more about why people do what they do. She also has come to feel hopeful that the minority of people who are *not* bored can make a difference.

Indeed, Ann Williams has. The spring after she joined the Club, Ann started teaching a special course at Bakersfield High on the literature of the environment, taking her students camping on weekend field trips into the high country up the North Fork of the Kern River. She was elected to the Kern-Kaweah Chapter's executive committee in 1973, and before the year was out she had volunteered to write her "Midgebuzzings."

She attempts to dismiss these short pieces as "not too important," but her readers think otherwise. Yes, her column may entertain them, but it also does some old-fashioned things: It inspires them, nourishes their spirits, and teaches them to "see." And they've sold her on bringing out her pieces in book form. Now she has begun to gather the pictures and artwork to include in it. "The Hart Park thing" will delay the book project for a while, though, she says.

Writing will continue to be an important part of Ann's life, she told me—now and into retirement. And she also will pursue her new calling of environmental activist, doing all she can to keep mankind from blowing up the world—and the human species along with it.

Then, of course, there is Hart Park. But when that issue has been resolved satisfactorily, Ann Williams will be able to start in earnest to work on an old dream of hers: to find ways to introduce today's children to experiences such as hers long years ago atop

"Midgebuzzings"

"We not only live on the earth but also are of the earth, and the thought of its death, or even of its mutilation, touches a deep chord in our nature."

Jonathan Schell, *The Fate of the Earth*

My first three memories are of people; yet they are also very much memories of the earth. When I was two, I waited at our front window for an old lady who passed our house on her daily walk. My mother allowed me to run after her calling, "My friend! My friend!" She would take my hand and we would walk thus, her cane tapping the sidewalk, guiding us under the sheltering trees. Somewhere not in my house I sat in her lap, looking through her magnifying glass at lions and tigers in faraway jungles, and eating the orange gumdrop candy shaped like half-moons that she seemed to keep just for me.

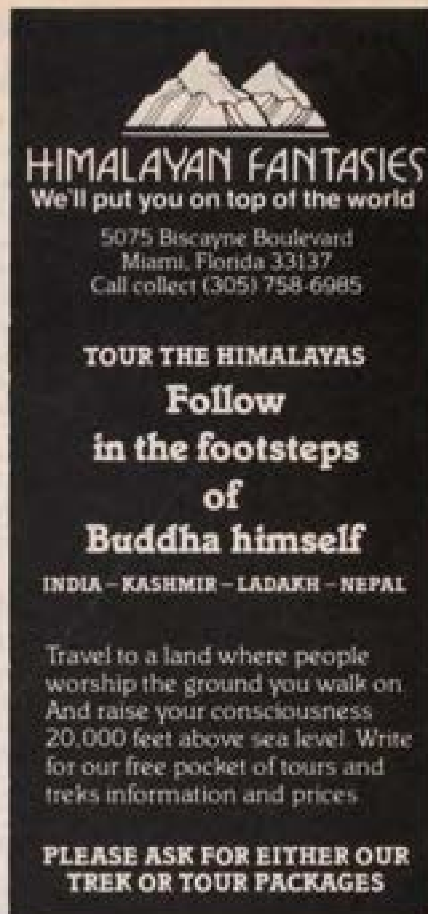
Again before I was three, we stayed briefly with a family. I was enthralled by the many children who shared beds and slept under the stars, and by the wooden spoons we ate with, and by the swing of knotted rope that hung from the highest branch of a large tree. Only later was I aware that it was poverty and not charm of invention that accounted for three in a bed, the sky for a roof, and wooden spoons.

The third memory from the same time is of a great field, and of my mother and another woman and her children, bent low over the ground, gleaning lima beans, and laughing as they worked.

Of the many beautiful things I must have seen in my first three years, these remain, along with a very distinct impression of a powerful emotion each time, like ecstasy. I think that feeling is the "deep chord" Jonathan Schell was speaking of in his expression of our oneness with the earth.

It is therefore unclear to me why those who seek to destroy natural values so often do so in the name of people, as if those who oppose that destruction were more sympathetic with nature than with men. From the beginning, I have not seen a distinction between nature and humanity, my first experiences, and those since, having been of the inextricable connection between them. But perhaps that is because of my age, and because there was more of nature to experience in my childhood than there is for children now. And perhaps that explains the paragraph in the essay of a 16-year-old in which she complained of the use in a short story of destroyed trees as symbols for the destroyed lives of two brothers. "Unlike people," she wrote, "trees are made for cutting, for using as paper, and boards, and other products."

Nothing pleads more eloquently for the preservation of natural places than her sad little statement. If it concerns you as much as it does me, ask yourself what you have done to help save parks and wild places for our children, and for their children after them. An entire generation that views the earth as that girl does is bound to lose it.—*Ann Williams*



Which of these languages would you like to speak?

Mark the one you want to speak in 2 or 3 months' time

☐ Afrikaans	☐ German	☐ Malay
☐ American English	☐ Greek (Modern)	☐ Norwegian
☐ Arabic	☐ Hebrew (Modern)	☐ Polish
☐ Chinese	☐ Hindi	☐ Portuguese
☐ Danish	☐ Indonesian	☐ Russian
☐ Dutch	☐ Irish	☐ Spanish
☐ Finnish	☐ Italian	☐ Swedish
☐ French	☐ Japanese	☐ Welsh

A Linguaphone Course makes you feel at home in almost any country. You'll never miss the meaning of conversations or be at a loss for words.

- It must work—over 4 million Linguaphone students in 88 countries speak a second language FLUENTLY
- Proven learning success. You LISTEN to real conversations on cassettes ... UNDERSTAND what you hear by following illustrated textbooks. HOLD CONVERSATIONS with the speakers.
- **You start speaking the very first lesson.** You learn at your own convenience.
- It's like having a private tutor
- You get a complete, professional language program at little cost
- You gain a good, working vocabulary
- In just 2 to 3 months you can speak another language with complete confidence
- You develop an authentic accent. Only native-born speakers are used

Linguaphone

MONEY BACK GUARANTEE **28 DAY FREE TRIAL**

World Language Courses, Inc. Dept. 319 313 Nolana Ave. McAllen, Texas 78504

FREE INFORMATION: Please mail me FREE information about learning the languages I have checked. FREE brochure.

Name (please print) ______________________

Street ______________________

City ______________ State ________ Zip ________

KEEP COOL!

The hotter it gets, the cooler you'll be with our unique new SolairCool® helmet. Solar electric cells power built-in evaporative cooling system for a cooling breeze everywhere you go. Ideal for gardening, hiking, working outdoors, etc. Tan or white.

MAJOR CREDIT CARDS WELCOME. Order yours today. Just $89.95 plus $4.95 for guaranteed surface shipping anywhere in Continental U.S.

1-800-638-8304

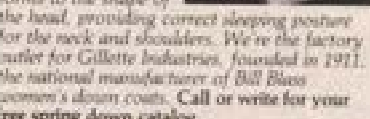
Ask for operator 16

ENERGY SCIENCES

1301 Piccard Drive, Rockville, MD 20850

Down Pillows

For complete bedtime comfort, select the finest down pillows money can buy at factory direct prices. White European Down filled pillows offer luxuriously soft support. Down conforms to the shape of the head, providing correct sleeping posture for the neck and shoulders. We're the factory outlet for Gillette Industries, founded in 1911, the national manufacturer of Bill Blass women's down coats. **Call or write for your free spring down catalog.**



The Company Store

1-800-356-9367

FACTORY DIRECT PRICE

	Normal Retail	SALE PRICE
Standard (20" x 26")	$60	$30
Queen (20" x 30")	$110	$40
King (20" x 36")	$125	$55

(Available in Lt. Blue or Beige)

ORDER BY PHONE TOLL FREE 1-800-356-9367. Use your credit card. OR ORDER BY MAIL:

☐ M.C. ☐ VISA ☐ Am. Exp. ☐ Check

Acct. No. ______________ Exp. Dt. ______

	Qty.	Color	
Standard $30 x	____	____	= $ ____
Queen $40 x	____	____	= $ ____
King $55 x	____	____	= $ ____
Ship. & Hdlg. $2.50 per pillow			= $ ____
TOTAL			= $ ____

Signature ______________

Address ______________

City/State/Zip ______________

Send to: The Company Store, Dept. Q 214, 1205 S. 7th St., La Crosse, WI 54601. Money back guarantee. Delivery: Immediate.

that fence in Chico. In her column this past February she wrote about a program that might fulfill that dream. She proposed that community volunteers work with the children of Bakersfield in a program to introduce them to the close-in natural habitat of Hart Park. With knowledgeable guides they would explore a small wild area of the park to learn about its inhabitants: badgers, raccoons, certain amphibians, hawks, owls, and many other wild creatures. Wildlife experts and other naturalists would visit schools. Projects such as nature-trail development and tree-planting round out the agenda. "Personally," Ann wrote, "I can't think of anything I would rather do with my own retirement time than take slide programs, on a volunteer basis, to elementary and high-school students, and other groups, to educate them about the preciousness of this park."

* * *

Just as this issue of *Sierra* was going to press, I received the following postcard from Ann Williams. It brought some welcome good news:

Dear Bob,
Well, after a year of blood, sweat, and tears, we managed some real success in the Hart Park thing. We did not succeed in getting it disapproved, although some of the supervisors did have their feet to the fire, but we saved the area . . . and will be able to keep the little marsh, the groves of beautiful old trees, and the historical monuments. That area and the slope of the hills above it (originally destined for the bulldozer's blade) will remain intact when the water amusement monstrosity has sunk into disuse. In less than 10 years, by my prediction, even the Neanderthals will be aware of the mistake . . . but the trees and the beauty will be there in spite of it.

Best, Ann

SILVER CELEBRATION

The Great Lakes Chapter is planning its 25th anniversary celebration, to be held June 6 at the Chicago Academy of Sciences. The chapter's Chicago Group is hosting the festivities. Gene Small, long-time program chair and activist within the group, hopes to have at least two of the chapter's founding members present: Ken Anglemire, the chapter's first chairman, and Harry Kurshenbaum. Ken served as the Sierra Club's unofficial missionary in the Midwest, organizing regional groups all over the chapter's vast, nine-state area. Membership grew from scarcely 200 in June 1959, when the chapter was formed, to 3,783 in September

1975, when Indiana broke off to become the Hoosier Chapter. By January 1, 1984, membership within the chapter's original area totaled more than 52,000, with 12,851 of that number belonging to the current Great Lakes Chapter (composed of Club members living in Illinois). Gene Small would like any other founders or early leaders of the chapter to get in touch with him at 4049 N. Long Ave., Chicago, IL 60641; (312) 545-7036.

WILDERNESS FIRST-AID COURSES

Everyone agrees on the importance of first-aid training, but it's hard to find courses designed for people who enjoy wilderness activities. Lectures and seminars on the subject provide valuable information—for those who have the skills to make use of it. To acquire those skills, however, most people have to take urban-oriented courses, usually taught by people who have little experience in wilderness conditions.

A new trend could be in the making, however. Steve Donelan, a Sierra Club leader in Berkeley, Calif., who is also an advanced first-aid instructor, has designed an intensive Wilderness First Aid (WFA) course. The course combines instruction in first-aid skills (slanted toward wilderness) with an up-to-date treatment of topics such as hypothermia, frostbite, altitude adaptation, and water purification.

Using the Standard First Aid (SFA) text and a lot of handouts, the course runs for six three-hour sessions (plus a final exam). Graduates receive a Red Cross SFA card. In return for Red Cross certification of the course, the instructors cover all the SFA material, and avoid teaching any techniques that go beyond approved first aid—that is, any that would require medical training to perform safely.

Nevertheless, WFA teaches students far more than regular SFA courses, for three reasons. First, WFA students tend to be more committed, because many of them enjoy activities in which they are far from medical help. Second, students are required to read the text and handouts for each class in advance, and are often quizzed on the materials. Finally, many people participate in the teaching of the course—other first-aid instructors, Sierra Club leaders, emergency-care professionals, and (especially) graduates of previous classes. With a pool of knowledgeable and experienced people involved, no one has to teach at the thin edge of ignorance, and many hands are available for skills instruction.

Another advantage of having many instructors and aides (some of whom may show up only for certain classes) is that the

DRINKING WATER PURIFIERS

FIRST-NEED® . . . a portable water purifier that is the answer to your drinking water worries wherever you go! (See "Purifying Water in the Wild", Sierra, July 83). Provides a physical barrier to giardia, disease bacteria, asbestos and other water-borne contaminants. Great for business trips, travel, camping, etc. Not just a filter but a water purification device. Just $39.95.

SEAGULL®IV . . . The stainless steel drinking water purifier for your home. Compact, non-chemical, requires no electricity. Same effectiveness as FIRST-NEED. Used by dozens of major airlines, embassies, hotels and corporations in over 30 countries. $289.95 complete with faucet and accessories.

Carries E.P.A. Est. Reg. No. 37403-PA-01 "Purification Device". Call TOLL-FREE 1-800-441-8166 to order on VISA or MasterCard. Made in U.S.A.

REMOVES GIARDIA!

REMOVES:
Giardia Cysts
Chemical Pollutants
Disease Bacteria
Radioactive Solids

Send literature First-Need® ☐ Seagull®IV ☐
Name
Address
City State
Zip Phone ( )

GENERAL ECOLOGY, INC.
151 Sheree Blvd./5, Lionville, PA 19353
(215) 363-7900 S-26
TWX 510-663-9318 GECOLOGY LION

On Sale!

Silk Turtlenecks!

$29.95 ea. in quantities of 2 or more

2 or more for $29.95 each
1 for $32.50
Price guaranteed through Sept. 1, 1984

For skiing, hiking, bicycling, riding, golf . . . or just dressing well on weekends. Enjoy the luxurious comfort of 100% pure knitted silk, the king of natural fibers. Silk is lighter, stronger, softer and warmer than any natural fiber. Our rich Wintersilks™ fabric is warm in cold weather when worn under an outer garment, and cool in summer when worn alone. Silk breathes, is not bulky and is easy to care for. Just hand or machine wash, like wool. Dries overnight at room temperature. Ideal for apres-ski, and for travelers who like to dress up but travel light. Men's/Ladies' S–XL unisex sizes in Navy, Red, or Champagne. Orders shipped within 72 business hours. *Order today!*

Call toll-free: *1-800-648-7455*
Alaska, Hawaii or Wisconsin: 1-608-241-2225

Guarantee: If not fully satisfied, return in as-new condition within 30 days of our shipping date for exchange, credit or refund of item purchase price (S & H charge not refundable). Sorry, we do not accept C.O.D. packages.

Quantity	Size	Color	Description	Price Each	Total
			Men's/Ladies' Silk Turtleneck (Navy, Red or Champagne)	$29.95/$32.50	
			Silk Aviator Scarf (Red or Champagne—not shown)	$22.50	

☐ Check ☐ Visa ☐ Master Card ☐ Amer. Exp.
Card No.
We ship UPS whenever possible. Be sure to give your complete street address. Exp.

Shipping and Handling	$3.25
5% Tax for Wis. Addresses	
Total Enclosed	

Name
Address
City State Zip

The White Pine Company 2038 Pennsylvania Ave., Dept. K07, Madison, WI 53704

Tahoe
An Environmental History
By Douglas H. Strong

The remarkable beauty of Lake Tahoe is proving its undoing. Commercial development has resulted in alarming environmental deterioration threatening to turn the blue waters green and scummy. This book tells the environmental story of the Tahoe Basin from the time of the Washo Indians to the present.
xviii, 252 pages. 26 b&w photographs.
ISBN 0-8032-4141-0 $16.95

new in paper

National Parks
The American Experience
By Alfred Runte

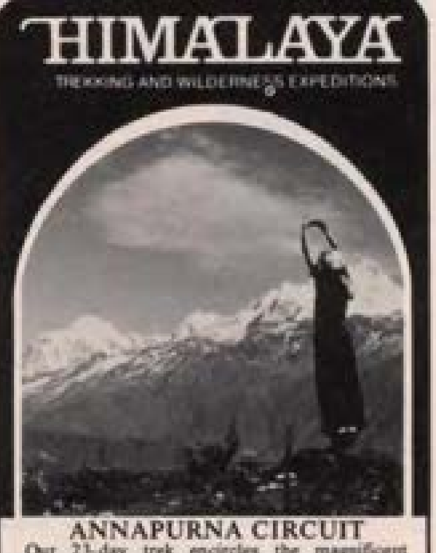
"How and why did our national parks come into being? What were the human motivations behind this astonishing development? These are the questions Alfred Runte seeks to answer in his admirably-researched highly-readable *National Parks: The American Experience*."—*National Parks and Conservation Magazine*.
xvi, 240 pages. 52 b&w photographs.
Paper ISBN 0-8032-8917-0 (BB 879) $6.95
Cloth ISBN 0-8032-3852-5 $16.50

The Platte
Channels in Time
By Paul A. Johnsgard

Rising high in the Rockies and flowing east across the plains, the Platte River makes a welcoming rendezvous for geologic, plant, animal, and human worlds. "My special hope," Johnsgard writes, "is that the river as a living complex, and natural ecological system can be more fully appreciated, and that whatever steps may be necessary might be taken to preserve the river's integrity."
xiv, 154 pages. 8 b&w photographs.
ISBN 0-8032-2560-1 $13.95

at your local bookstores or from
University of Nebraska Press
901 North 17th Lincoln 68588

HIMALAYA
TREKKING AND WILDERNESS EXPEDITIONS



ANNAPURNA CIRCUIT
Our 23-day trek encircles the magnificent Annapurna Massif encountering a fascinating variety of climates, landscapes and cultures. From Hindu villages in subtropical lowlands, we climb to Buddhist monasteries on the fringe of the Tibetan Plateau before crossing a 17,700-ft. pass to the Kali Gandaki River Gorge — the deepest in the world.
Since 1977, **HIMALAYA** has offered walking trips focusing on the cultures of remote **Nepal, China/Tibet, Kashmir/Ladakh,** and **Pakistan** as well as mountainous **Japan, New Zealand, Peru** and more.
For an illustrated travel portfolio detailing all of our more than 20 trips, write or call HIMALAYA, INC., 1802 Cedar Street, Berkeley, CA 94703, (415) 540-8031.

course is always developing. Everyone learns from teaching it, and no one is reduced to parroting the text. Classrooms are set up seminar-style, so students and instructors can see and talk with one another easily. Donelan has found that a hollow square of tables, with room inside for demonstrations, seems to work best. Rapid alternation of explanations with practical work keeps things moving. Dramatization of and role-playing in simulated wilderness-accident situations teaches students to put their skills together while conditioning them to respond effectively in an emergency. It's important to keep everyone involved, Donelan says—to elicit material from students instead of putting them to sleep with a straight lecture.

Wilderness First Aid has been swamped with applicants. Course meetings are announced in the local Sierra Club newsletter (*The Yodeler*) and Red Cross schedule. Plans are afoot to develop an advanced WFA course as well, which would include a choice of field-trip options (e.g., mountain rescue, water safety) in cooperation with local sections of the Sierra Club and other wilderness organizations. If you are interested in developing a similar course—or if you've already done so—you may want to exchange ideas with Steve Donelan. Write to him at P.O. Box 1227, Berkeley, CA 94701.

WILDERNESS '84: OFF TO A ROUSING START

BRUCE HAMILTON

"It was an old-fashioned wilderness activists' revival," said John Karel in describing the launching of the Wilderness '84 lobbying campaign. Karel, a Missouri Sierra Club leader who chairs the Club's national wilderness legislation campaign, was one of 60 volunteers from 28 states who went to Washington, D.C., for five days in early March for an intensive strategy conference and lobbying blitz. Their mission was to break the logjam that was stalling wilderness legislation in Congress. "There is no question that over the course of the week we achieved the broad purposes of raising the profile of wilderness issues and inspiring the efforts of local wilderness campaigns," said Karel.

"With the exception of the historic Alaska National Interest Lands Conservation Act (ANILCA) campaign in 1980, Wilderness '84 is the biggest drive for wilderness legislation

RAIDER FEDORA

19[95] ppd

A revival of an old favorite. Harrison Ford wore one like this in **Raiders Of The Lost Ark**, reminding us of how much adventure a man in a fedora can find. Our version is of special wool felt, finer textured and stiffer for improved shape retention over ordinary felts. Features a tapered 5" crown with triangular crease and 2 side tucks, a 2½" brim and a deep brown grosgrain band. Fully lined with rayon satin. Sizes 6¾ thru 7½.

We honor VISA and MASTERCARD. Call Toll Free 800-334-5476. Write for FREE Catalog!

P&S Sales Dept. E-54
P.O. Box 1600, Chapel Hill, NC 27515

ZERO NET MIGRATION

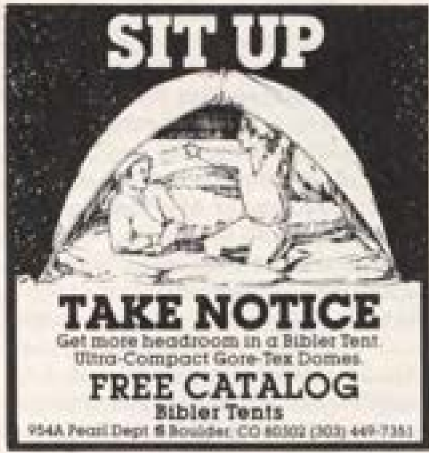
Polls show that an overwhelming majority of Americans believes not only that illegal immigration must be stopped, but that legal immigration must be reduced.

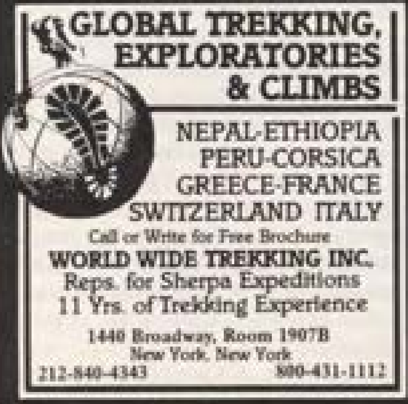
Taking only legal immigration into account, in 1982 net migration (in-migration minus out-migration) was over 500,000. We believe that each year immigration (in-migration) should be balanced with emigration (out-migration) so that net migration will no longer contribute to U.S. population growth.

Such a balance would result in ZERO NET MIGRATION. In addition to halting illegal immigration completely, a policy of ZERO NET MIGRATION would require reducing legal immigration to an overall ceiling of about 100,000, including relatives and refugees. (More than 600,000 legal immigrants entered the U.S. in 1982.)

Write today for our FREE BROCHURE

NEGATIVE POPULATION GROWTH, INC.
16 East 42nd St., Suite 1042 (L-3)
New York, NY 10017





Wilderness '84 participants gather with Ohio Democratic Rep. John Seiberling (left) before embarking on a day of lobbying.

in more than 25 years," said Sierra Club Conservation Director John McComb at the press conference held to announce the campaign. "If we keep up the pressure, we could emerge from this Congress with as much as 10 million acres of newly protected wilderness."

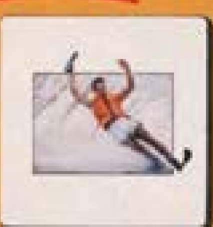
The Wilderness '84 conference and lobby week was conceived and carried out by the Sierra Club, Friends of the Earth, and The Wilderness Society as the kickoff of a year-long campaign. Participants attended a series of political briefings, lobbying training sessions, and brainstorming workshops. Activists from states facing similar wilderness problems were grouped together to share ideas and strategies, while lobbyists and field staff from the three conservation organizations were available to assist, train, and guide the volunteers.

The lobbying part of the week included morning briefing sessions, a full day of visiting congressional offices, and evening debriefing sessions at which the day's events were reviewed. Each volunteer lobbyist called on members of his or her own congressional delegation in addition to visiting the offices of those members of Congress who serve on committees relevant to wilderness legislation. The volunteers spread the message in hundreds of offices that this year conservationists across the country want to see strong wilderness bills passed and anti-wilderness bills rejected.

Two highlights for the participants were the meetings with House Interior Committee Chairman Morris Udall (D-Ariz.) and

35mm That Comes Alive

Prints and Slides from the same roll



Kodak MP film . . . Eastman Kodak's professional motion picture (MP) film now adapted for still use in your 35mm camera by Seattle FilmWorks. With micro-fine grain and rich color saturation, it meets the exacting standards of Hollywood filmmakers. With wide exposure latitude, you don't have to be a pro to get great everyday shots or capture special effects. Shoot in low or bright light from 200 ASA to 1200 ASA. Get prints or slides, or both, from the same roll. And it's economical! ©1984 Seattle FilmWorks

INTRODUCTORY OFFER

☐ RUSH me two 20-exposure rolls of your leading KODAK MP film— Kodak 5247® (200 ASA). Enclosed is $2.00. I'd like to be able to get color prints or slides (or both) from the same roll and experience the remarkable versatility of this professional quality film.

NAME
ADDRESS
CITY
STATE ZIP

894

Seattle FilmWorks
500 Third Avenue West, P.O. Box C-34056
Seattle, WA 98124

Limit of 2 rolls per customer.

Kodak 5247 is a registered trademark of the Eastman Kodak Company.

Cobwebs & Icicles

by John McMichael

A book for those moments of reflection that make one acutely aware of his worth in this world.

- A "coffee table" book of the finest quality and craftsmanship
- 75 full-color plates plus text, 9½" × 8½"
- The ideal gift for anyone who admires the beauty contained in life's common touch

To: MILKHAUS BOOKS, P.O. Box 81, Cambridge Springs, Pa. 16403
Send check or money order for $25.00 plus $2.50 postage and handling. Pa. residents please add 6% sales tax ($1.65/copy).

Please send me _____ copies of *Cobwebs & Icicles.* I enclose $_______.

NAME ____________________

ADDRESS ____________________

____
CITY STATE ZIP CJ3

Steiner 8 x 30 - The Leading German Military-Marine Binocular.

There I was, in the dwindling daylight of dusk, wheelin' down Whiteface Mountain. Over rocks and ruts. The wind splashing in my face.

Then . . . Half sitting, barely standing, one hand gripping the wheel of my jeep, I reached for my Steiner **Military-Marine Binoculars.**

And there . . . Bright and clear through my Steiner 8 × 30's, I spotted a lone sparrow hawk gliding buoyantly against a brown and grey mountain wall.

Steiner's **Military-Marine** Binoculars are extraordinarily bright and clear. Their lightweight construction and rugged rubber-coated exterior assure easy handling and control even while on the move. Plus, they're shock-proof, water-protected and unbreakable.

Other Steiner models include the 7 × 50 **Commander** with built-in compass.

Try a pair at the Steiner Test Range at your dealers now.

All inquiries will also be sent to the closest Steiner dealer.

U.S. Marketing Office
Pioneer & Company
216 Haddon Ave.
Westmont, NJ 08108
(609) 854-2424

Call our SPECIAL HOTLINE
1-800-257-7742

House Public Lands Subcommittee Chairman John Seiberling (D-Ohio). "Your presence, taking the message of public support for action on wilderness right into congressional offices, is of the utmost importance," Rep. Seiberling told the group. "Congress must get the message that folks back home want their wilderness heritage preserved."

Major funding for the strategy conference and lobbying week was provided by Recreational Equipment, Inc. (REI), the outdoor-equipment cooperative based in Seattle, Wash. Each year a portion of REI's pretax profit is earmarked to support conservation work, including wilderness preservation. The funding for Wilderness '84 is the largest grant REI has ever given, and it represents a degree of financial support for conservation unprecedented among manufacturers and retailers of outdoor equipment.

"We want to see America's endangered wilderness preserved," said Henry Steinhart, chairman of the REI Social and Environmental Committee. "What is needed is an outpouring of citizen support—lobbying, letter-writing, and work with the media in support of wilderness legislation—and that is what REI is helping to build."

REI's support of Wilderness '84 will continue throughout the year. Its generous grant will help the Sierra Club and other groups augment their existing wilderness campaigns; it will also help grassroots activists go to Washington to testify and lobby on individual wilderness bills. Significant REI support will also help these same activists mobilize public support back home with letter-writing, rallies, and publicity drives.

At its March 31 meeting the Sierra Club Board of Directors unanimously adopted a resolution noting the significance of REI's contribution to Wilderness '84. "The Sierra Club extends the appreciation of its members to REI, an appreciation we know is shared by all lovers of the American wilderness," the Board resolved. "We are determined that Wilderness '84 will make a lasting difference, and we are proud to continue our association with REI on behalf of our public lands."

In the weeks following the conference, it became clear that the momentum built by the Wilderness '84 conference was already making a difference. In late March and April there was a flurry of activity on wilderness bills, including some resounding victories for wilderness advocates in both the House and Senate (see "News," page 15). "Ironically, if our Wilderness '84 campaign is successful, Ronald Reagan, who has opposed virtually all of these wilderness bills, could sign more forest-wilderness legislation than any of his predecessors," said John McComb.

As Joni Bosh, a Sierra Club wilderness

leader in Arizona, pointed out at the Wilderness '84 press conference, "Wilderness is an issue that can't be ignored. We are not going to go away. Nor are we going to let wilderness be whittled at, weakened, or twisted. And we are not going to let those who oppose wilderness play one state off against another. So I'll be going home to spread the word that we are not alone—that our efforts, united with those of colleagues in so many other states, can propel all of these wilderness bills to success."

Bruce Hamilton is the Sierra Club's Director of Conservation Field Services.

SIERRA NOTES

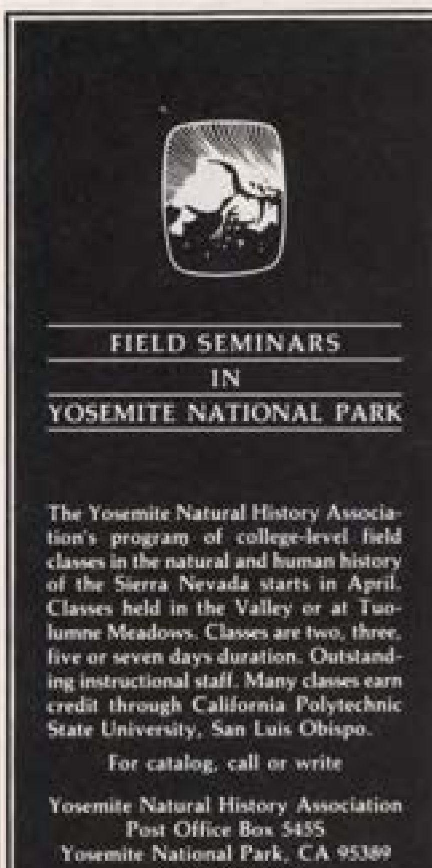
• What people can do to help prevent nuclear war will be the focus of the Second Biennial Conference on the Fate of the Earth, to be held in Washington, D.C., June 6-12. The conference series, which is endorsed by the Sierra Club, is based on the ideas that conservation is an inseparable ingredient of lasting peace and worldwide security and that it is important for the environmental community to begin working to reduce the threat of nuclear war.

While the first conference, held in New York City in 1982, addressed the devastating consequences of nuclear war, the Washington meeting will turn toward techniques and strategies for change on the local, national, and international levels.

The program, to be chaired by Ansel Adams, will include more than 100 speakers, panelists, and workshop leaders. Some 2,000 activists from across the nation are expected to attend.

For more information about the conference and registration, contact William Kenney, Conference on the Fate of the Earth, 1045 Sansome Street, San Francisco, CA 94111; (415) 788-0383.

• On April 9 the Sierra Club produced its first live teleconference—a news conference with participants linked by a Westar V communications satellite—as a way of highlighting the Club's involvement in the selection of delegates to the Democratic and Republican national conventions. News conferences in Washington, D.C., Philadelphia, San Francisco, and Dallas were linked by television, while participation in the audio portion was conducted via telephone. Television and radio stations capable of taping or airing the teleconference were



encouraged to do so. Club leaders hope this new forum for airing their views will increase public awareness of Sierra Club policies.

• Sierra Club Books has announced the publication of several new titles. All may be ordered through the Sierra Club Catalogue, which is mailed to all Club members. Nonmembers may order books (*not* other Catalogue items) from Sierra Club Books (P.O. Box 3886, Rincon Annex, San Francisco, CA 94119).

Among the new titles is a completely revised and updated edition of John Hart's highly regarded *Walking Softly in the Wilderness: The Sierra Club Guide to Backpacking* (paper, $8.95; $7.15 for Club members). The first two volumes in the new series of Sierra Club Guides to the National Parks are also available now; these are the guides to the Desert Southwest (paper, $12.95; $10.35 members) and the Pacific Southwest and Hawaii (paper, $11.95; $9.55 members).

Other new titles include: *The Coevolution of Climate and Life*, by Stephen H. Schneider and Randi Londer, $25 ($20), paper; *The Home Energy Decision Book*, by Gigi Coe, Michael Garland, and Michael Eaton, $9.95 ($7.95), paper; *The Heirloom Gardener*, by Carolyn Jabs, $17.95 ($14.35) cloth, $9.95 ($7.95) paper; and *Hiking the Old Dominion: The Trails of Virginia*, by Allen de Hart, $10.95 ($8.75), paper.

• A miniseries of poetry readings to benefit the Friends of the Colby Library will be presented in San Francisco at the First Unitarian Church this spring. Renowned local poets with international reputations will be featured: Gary Snyder on May 18, and Lawrence Ferlinghetti on June 8. Both will read selections from their nature poetry. Club members planning to visit San Francisco on those dates may pick up tickets ($5 for one reading, $8 for both) at the Sierra Club Bookstore (530 Bush St.) or at City Lights Bookstore in North Beach.

• Brock Evans, a Sierra Club Director, is running for a seat in the House of Representatives in Washington's First Congressional District. The open seat, left vacant by the retirement of Republican Joel Pritchard, will be contested with a primary in September and a general election in November. Evans faces a field of two other Democratic candidates in the primary, which encompasses most of the northern part of the Seattle area.

• The May issue of *Sunset* magazine features a 16-page cover story on wilderness in the western United States. Part of the editorial package is an invitation to *Sunset*'s readers to send for a listing of some 300 trips

into designated and proposed wilderness areas in the 11 western states. The trips are to be conducted by a variety of organizations and groups, including the Sierra Club.

Among the numerous Club entities to respond to *Sunset*'s appeal for trip listings was the Southern California Regional Conservation Committee. Sally Reid, SCRCC wilderness coordinator, provided the magazine with a list of dayhikes into the region's "Rim of Wilderness" roadless areas, all of them within a 100-mile radius of metropolitan Los Angeles, and all of them threatened by recreational or economic development. The trips will be made on specified dates between June and November of this year. For information, see the May issue of *Sunset* (Menlo Park, CA 94025; $1.50/copy) or contact the Sierra Club's Sally Reid (P.O. Box 5306 Pine Mountain, Frazier Park, CA 93225) or Joyce Burk (P.O. Box 106, Barstow, CA 92311).

• International visitors to Los Angeles for this summer's Olympics can enjoy a number of hikes through the Santa Monica Mountains National Recreation Area, cosponsored by the Angeles Chapter and the National Park Service. Several hundred thousand copies of the hike schedule will be distributed from NPS information booths at the three Olympic Villages in Santa Barbara and Los Angeles. For a copy of the schedule—to be made available in early June—send a self-addressed stamped envelope to Olympic hikes coordinator Lou Levy (4961 Edgerton Ave., Encino, CA 91346). "We fought so hard to preserve the Santa Monicas," Levy says, "that we want to take this unprecedented opportunity to share what we have with the rest of the world."

If the international visitors bring their cameras along on a hike or two, they'll be welcome to enter their best prints in the photo contest being cosponsored by the Angeles Chapter's Camera Committee and the Santa Monica Mountains Task Force (SMMTF). The contest is open to all. Eight $50 prizes will be awarded. As many as six entries may be submitted. Each photo must have been taken within the geographic limits of the Santa Monica Mountains, and must be previously unpublished in any medium intended for the general public. Black-and-white or color prints mounted on standard-size mounts are eligible, but must be no larger than 16×20. Each entry must be accompanied by the photographer's name and address and a caption describing the content of the photo. In addition, there is a $5 entry fee per contestant. (Make checks payable to SMMTF.) Contest deadline is September 1, 1984. Send entries to Photography Contest, Sierra Club, 2410 Beverly Blvd., Suite 2, Los Angeles, CA 90057. □

The Lord calls out: "Is there anyone here who yearns for life and desires to see good days?"

St. Benedict

We respond to God in prayer
to know His presence and
to pray for the world's healing.

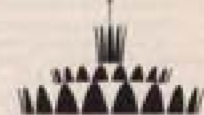
We respond to God in work
running a challenging prep
school, serving in pastoral
work and other ministries.

We respond to God as brothers
as we support each other in
our common life.

Come and serve the Lord as a monk of the Benedictine Community of Saint Louis Priory

For more information about our monastery write:

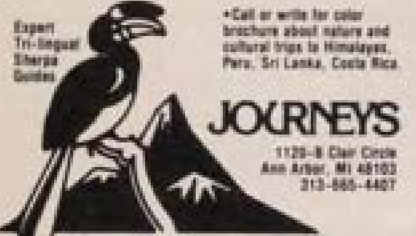
Fr. Ralph Wright, OSB
Saint Louis Priory
500 S. Mason Road
Room 9
Saint Louis, MO 63141



FOREIGN TRAVEL

NEPAL 1984–85

TREKKING, RAFTING, WILDLIFE EXPEDITIONS TO EVEREST, ANNAPURNA, MAKALU, LANGTANG REGIONS OF NEPAL & LADAKH



Expert Tri-lingual Sherpa Guides

•Call or write for color brochure about nature and cultural trips to Himalayas, Peru, Sri Lanka, Costa Rica.

JOURNEYS
1120-8 Clair Circle
Ann Arbor, MI 48103
313-665-4407

ENVIRONMENT TOUR
RUSSIA . . . IN DEPTH

for all that lives

TRANSIBERIAN RAILWAY ADVENTURE
AWESOME, VAST ENVIRONS OF SIBERIA AND RAILWAY JOURNEY TO AREAS OF MONUMENTAL GROWTH AND PROTECTION

JUL. 14-AUG. 5 '84 — 23 days
PRICE: $2550. FINNAIR

Amity Tours, Inc.
1 First Street, Suite H
Los Altos, CA 94022
(800) 227-6928 (California)
(800) 523-8406 (Outside Ca.)

SLICKROCK KAYAK ADVENTURES

Explore the wilderness of Canyonlands by river
Unique instructional kayak trips in CO, UT, ID
'Never - ever' to advanced boaters welcome
Adventure travel expeditions to Mexico, Nepal, and more

Free color brochure
P.O. 1400, Moab, Utah 84532 (303) 963-3678

Explore Mexico's Sierra Madre Mtns.
Live with native family • Mulepack trip
Learn Spanish & traditional crafts

ARRIMATE TOURS

Box 7234-S • Boulder, CO 80306
303-449-8896
Write or call for more information

WILDERNESS
ALASKA MEXICO

Brooks Range Backpacking & Kayaking
Whitewatering in Baja, California, Mexico
Yukon River Float, Sea of Cortez Kayaking

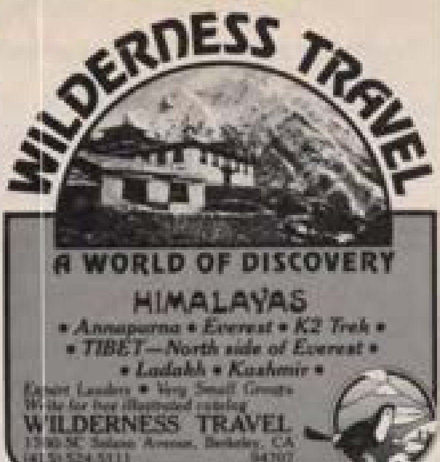
Wilderness: Alaska/Mexico, Dept. S
Hunters, WA 99137 (509) 722-6164

Make your dream of discovering a part of Canada's untouched wilderness come true! Float the Coppermine River, far above the Arctic Circle WITH THE EXPERTS.

ARCTIC WATERWAYS — The Gentle Rafters

Safe, silent, oar-powered rafts are our means of transportation to areas otherwise inaccessible to all but the hardiest of adventurers. Char fishing. Wildlife sightings. Photography. Hiking. Knowledgeable rivermen. More remote river trips also available. Or come on a coastal hiking adventure farther north. Sex and age are no barrier. Good health and a real love of the outdoors are the only prerequisites. Small groups: July and August.

ARCTIC WATERWAYS Inc.
Stevensville, Ontario, Canada L0S 1S0
(416) 382-3882 Coppermine River trip: 2 WKS. all incl.
$1680 Canadian funds (approximately $1375 U.S.)



A WORLD OF DISCOVERY

HIMALAYAS
• Annapurna • Everest • K2 Trek •
• TIBET—North side of Everest •
• Ladakh • Kashmir •

Expert Leaders • Very Small Groups
Write for free illustrated catalog

WILDERNESS TRAVEL
1760-SC Solano Avenue, Berkeley, CA
(415) 524-5111 94707

GALAPAGOS

Small Group HIKING & SAILING EXPEDITIONS on 70'-105' yachts. We are Licensed Galapagos naturalists. 1984 Departures: 5/3, 5/23 (Special TUI DE ROI MOORE Photo Tour), 6/28, 7/12, 7/26, 8/9, 11/15. Free brochure.

INCA FLOATS 415/435-4622
16068 JUANITA, TIBURON, CA 94920

SAIL A SCHOONER

to the SAN JUANS, VICTORIA and CANADA.
ENJOY fine cuisine and superior service.
EXPLORE marine life, art and photography.
EXPERIENCE a unique sailing vacation.

Brochure:
PACIFIC CLIPPER CRUISES
P.O. Box 243, Port Townsend, WA 98368
Phone: (206) 385-4271

NEPAL • JAPAN
TRANSYLVANIAN ALPS

Pyrenees • Madagascar/Reunion
Yugoslavia • Kashmir/Ladakh
Tasmania/Tahiti • China • Peru

Culture & wildlife treks and expeditions

Above the Clouds Trekking

Call or write for a free brochure:
P.O. Box 398S
Worcester, MA 01602-0398
(617) 799-4499

WILDERNESS JOURNEYS
RIVERS, OCEANS, & MOUNTAINS

Join whitewater paddling, natural history oriented adventures in **California, Oregon, Idaho** and **Alaska** . . . Join cultural, natural history, and art workshop treks to **French Polynesia, Swiss-Italian Alps, Japanese Alps, Italy, New Zealand,** and **Nepal.**

Unique, off-beat adventures with expert leaders and small groups.

Write for free catalog and detailed itineraries.

JAMES HENRY RIVER JOURNEYS
Box 807S, Bolinas, CA 94924
(415) 868-1836

NEW ZEALAND & AUSTRALIA
Walkabouts

Nature, Hiking & the Outdoors

A selection of escorted and independent tours featuring New Zealand's scenic National Parks & Milford Track; Australia's Outback, Far North, & Great Barrier Reef. Extensions to Tahiti, Fiji, & New Guinea.

Write for descriptive brochure:
PACIFIC EXPLORATION CO.
Box 3042-S
Santa Barbara, Calif. 93130
(805) 687-7282
Travel Adventures in Natural History

AFRICA • AMERICAS • ASIA
EUROPE • M. EAST • PACIFIC

EXPLORE

Over 350 unusual travel programs worldwide. EXCEPTIONAL PERU, ECUADOR, GALAPAGOS, MAYAN MYSTERIES, Rainforests, COSTA RICA, Archaeology, Walks/Tour EUROPE, AFRICAN ADVENTURES (from $1447 with air), KENYA, TANZANIA, Lemurs, MADAGASCAR, Gorillas, RWANDA, Walking/rafting safaris ZAMBIA, Exotic SRI LANKA, Tour or trek CHINA, treks MIDEAST, HIMALAYAS, AUSTRALASIA, Wild NORTH AMERICA, MANY OTHERS, incl. PROFESSIONAL DELEGATIONS.

FORUM TRAVEL INTERNATIONAL
2437 Durant Ave. #208, Berkeley, CA 94704 (415) 843-8294

Folkways International Trekking, Inc.
14903 S.E. Linden Lane, Milwaukie, OR 97222
503-653-5882 800-547-7400 (outside Oregon)

BHUTAN
New 6-8 day tours
16-30 day treks

Scheduled departures or special arrangement

Peru

Andes trekking in the spectacular Cordillera Blanca and along the Inca Trail to Machu Picchu. Overland trips by expedition vehicle. Amazon wildlife safaris. Departures May thru Dec. From $590.00 + airfare. Free brochures.

McGregor Adventures
33 Lewis Street
Greenwich, CT 06830
in CT (203) 622-0055
Toll Free (800) 243-5330

WE CAN ARRANGE PRIVATE TREKS AND CLIMBS

"Guided treks and custom adventures to Annapurna, Everest, Manang, Tiger Tops and remote regions of Nepal, 6 days to 6 weeks, from $595. Also bicycle tours of Scotland, New Zealand, Nepal, and Sri Lanka. Free color brochure."

7348 15th N.W. Seattle, WA. 98117
ph(206)783-4267, or 1-800-672-6661

Euro-Bike Tours

- Hotels
- Bike Rental
- Also for Less Experienced

Euro-Bike Tours
P.O. Box 40, Dept. S
DeKalb, IL 60115
Tel. 815-758-8851

SWISS ALPS

Moderate DAY hiking tours, 2 or 4 weeks. Ride up above tree line and hike down. Over 50 optional length hikes basing one week at 10 charming mountain villages in 3 or 4 star hotels. Write for free brochure.

ALPINE ADVENTURE TRAILS TOURS
783 Cliffside Dr., #202
Akron, OH 44313

swissair

BICYCLE BRITISH COLUMBIA. Tour the Gulf Islands, Vancouver Island, or interior valleys of Canada's most spectacular province. Fun trips for cyclists of all abilities. Courteous guides, vehicle support, accommodations, bike rentals. Free brochure. **NORTHWEST BICYCLE TOURS,** 14556 - 104th Ave., Surrey, B.C., Canada V3R 1M2. (604) 589-3328.

WALK...in the footsteps of Thomas Hardy and "The French Lieutenant's Woman"—personally escorted 2, 3, 7 and 14-day leisurely walks through some of Britain's most beautiful scenery.
Details from: Moira Lubbock, 535 W. 110 St., N.Y., NY 10025
West Coast Rep: Celeste Moreno, 2340 Union St., #6, S.F., CA 94123.

American Alpine Institute

EXPEDITIONS OPEN TO APPLICATION
Makalu II (spr. '85), **Baruntse** (spr. '86), **Nun** (sum. '87), **Huascaran** (Jul. '84/'85), **Alpamayo** (Jun. '85), **Aconcagua** (Jan. '85), **McKinley** (May-Jun. '85)

FALL & SPRING IN NEPAL
Everest Climbing & Trekking - three-week program including Everest Base & ascents of two 20,000-foot peaks, Lobuche & Island Peak, or trekking only
Annapurna Climbing & Trekking - 4 weeks, ascents of three 20-21,000' peaks or an option to trek only

PACIFIC NORTHWEST
Alpine Mountaineering - basic & intermediate levels
Summer Ice Climbing - advanced level
Rock Climbing - basic, intermediate, & masters levels
Guided Climbs - the classics of America & Canada

LATIN AMERICA
Peru & Bolivia - instruction & ascents to 21,000'
Mexico - intro/in-alt. on 1 & 2-week trips, Nov-Mar
Ecuador - ascents of 17-20,000' peaks, optional instructional itinerary, Galapagos options, Nov-Jan
Natural History - treks in Ecuador, Peru, Bolivia

For free brochures call or write
A.A.I., 1212 24th S-45, Bellingham, WA 98225
(206) 671-1505

Sierra Club members turn to AdVenture for ideas on travel and vacations as well as mail-order products & services.

EUROPEDS

Pedaling the backroads of Europe

BIKE TOURS IN THE FRENCH PROVINCES
4 Itineraries: Coastal Brittany • Pyrenees Foothills
River Gorges (Perigord to Provence)
Paris to Mediterranean Sea
Delightful Inns • Superb cuisine • Support van
Mechanics • Experienced Guides
EUROPEDS 195 CLAREMONT • LONG BEACH, CA 90803
PETER BOYNTON (213) 493-5780

HIKE SPECTACULAR SWITZERLAND
15 DAYS THRU THE MOST MAJESTIC ALPINE REGION · BERNER OBERLAND · LOVELY INNS · EXCELLENT FOOD · BAGGAGE TOTED
CONTACT *EUROPEDS* AT ABOVE ADDRESS

LAND OF THE INCAS

Deluxe trek/trail ride to 15,500'. Includes Cuzco, Urubamba Valley, 3 days, 2 nights at MACHU PICCHU, native markets, glaciers, hot springs, jungle, rafting. 1984 Departures: 6/6, 6/20, 7/4, 8/29, 9/12. Free brochure.
INCA FLOATS 415/435-4622
1606B JUANITA, TIBURON, CA 94920

BACKPACK CANADA & U.S.!

Backpacking treks and Base Camps on trails in scenic exciting mountain areas in the United States and Canada. Adult, co-ed groups. Have a wonderful time. Send for list of 1984 trips.

Willard's Adventure Expeditions
Box 10, Barrie, Ontario
Canada, L4M 4S9 **705-737-1881**

CAREFREE BICYCLING VACATIONS

Mid-Atlantic U.S. and China

Country Inns, Support Vans, Bike Rentals, Leader/mechanics. Beginners encouraged!
1506-CS3 Belle View Blvd.
Alexandria, VA 22307 USA
(703) 768-TOUR

FREE BROCHURE

SEEKING EXOTIC VACATIONS?

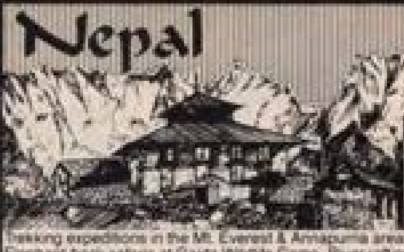
Lively newsletter searches for exotic, unforgettable travel for you. Reports expeditions, adventures, specialty tours, remote escapes. $24 for 12 monthly issues or write for free details. Guaranteed. Our name says it all!
UNIQUE & EXOTIC TRAVEL REPORTER
Box 98833-S, Tacoma, WA 98499

FREE CATALOG OF BIKE TOURS

Country Cycling Tours
140-S West 83rd St. • New York, NY 10024 • 212-874-5151

I want to enjoy the outdoors, without roughing it, and to meet nice people. Tell me about your adult tours in N.Y., New England, Penn., Maryland, France, England, Ireland, Nova Scotia, Israel and Africa.

Name ________________
Address ________________
City/State/Zip ________________



Trekking expeditions in the Mt. Everest & Annapurna areas. Elephant-back safaris at Gaida Wildlife Camp. River rafting, mountaineering, sightseeing.

KASHMIR/LADAKH • BHUTAN • SIKKIM • TIBET • SRI LANKA • MALDIVES • BURMA • THAILAND • INDIA

Group and independent departures. Complete travel service for the Himalayan Region since 1978. Write or call for our free adventure trip catalog.

Himalayan Travel, Inc.
P.O. Box 481-S, Greenwich, CT 06836. (203) 622-0055.
Toll-Free at McGregor Travel (800) 243-5330.

BIKE TOURS

Meander from castle to castle on the backroads of the **real** Europe and New Zealand.
Two week tours with hotels and escort vehicle.
GERHARD'S BICYCLE ODYSSEYS
4949 S.W. Macadam (503)
Portland, Ore. 97201 223-2402

HIKE THE SWISS ALPS. Special hiking tours led by author/mountaineer Fred Jacobson. Appenzell, Kandersteg, Lenk, Murren, Pontresina, Saas-Fee, Sils Maria, Zermatt. Spectacular scenery. Challenging trails. Delightful country inns. Superb cuisine. 12th summer! Write: Jacobson, Dept. F, Chappaqua Travel, 24 S. Greeley Ave., Chappaqua, N.Y. 10514.

"Go Raft!" "We ONLY book River Trips... ALL the Outfitters on ALL the Rivers — U.S. & Int'l. We have all the information you need in ONE place and we really DO help!... Raven's specialty is Groups, Family, Friends or Special Interests. Peter's is Whitewater. No cost to you.
FREE "RAFTAMERICA" MAP
For Immediate Service 707-882-2258 and our Brochure
River Travel Center 200—S-5 Center Street Point Arena, Calif. 95468

DOMESTIC TRAVEL

Come experience the adventure of bicycling in the most scenic areas of the Pacific Northwest.

Camping or Country Inn tours in the Cascade Mountains, the San Juan Islands, the Oregon Coast and more. Weekend and one week tours. Complete packages include Gourmet Meals, experienced guides, and support van. High mountain lakes and tall evergreen forests await your arrival in God's Country. Send for our free brochure.

1275 N.W. 180th Avenue
Dept. SC-5
Beaverton, OR 97006
(503) 645-2526

Tailwind Bicycle Touring Outfitters, Inc.

llama pack trips

San Juan Mountains
C O L O R A D O

Low impact, guided llama treks in the Weminuche Wilderness north of Durango for groups of 1 to 6. Spectacular scenery, hiking, fishing and climbing. Food, hot showers, and most camping gear provided. Send for free brochure.

San Juan Llama Company
P.O. Box 5110, Durango, CO 81301

The finest in high-quality alpine adventures. Our 16th year of guiding in Grand Tetons, Wind Rivers, Beartooths. Year-round programs for beginners to the most proficient. Guiding, instruction, treks. Brochure on request.

Jackson Hole Mountain Guides

P.O Box 547, Teton Village, Wyoming 83025
307-733-4979

RAFTING ALASKA

CUSTOM RIVER ADVENTURES
Rafting · Fishing · Camping
Photographic Safaris

ALASKA WILDERNESS EXPEDITIONS, INC.
P.O. Box 73297
Fairbanks, AK 99707

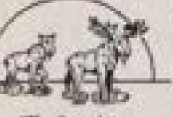
907-457-7715
907-479-5496

GREAT BASIN TOURS

Nevada & Utah

Daily Hikes, climb highest peak in Nevada, explore caves, old mining towns. Bristlecone pines, car camp in Great Basin desert of Nevada & Utah 7/15-7/24/84 from Reno NV $450.00 Free Brochure. Great Basin Tours Box 454, Yerington NV 89447

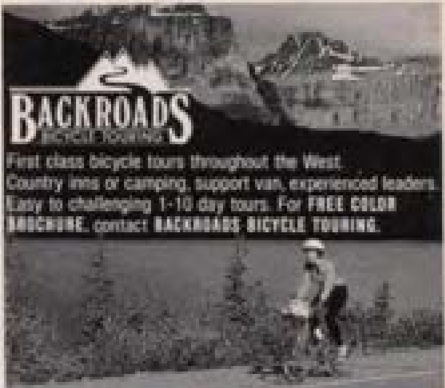
TEKLANIKA TOURS



"The Complete Alaskan Experience"

- Specializing in wilderness backpacking and river floating adventures from 2-10 days in the interior and the Brooks Range
- Economically priced trips custom designed for small groups
- Resident Experienced Guides
- Remote Cabins

Box 10367 Curry's Corner, Fairbanks, AK. 99710
(907) 452-7194 or 457-7194



RAFTING · BACKPACKING · HORSEPACK FLOAT
IDAHO · OREGON · ALASKA

ROW

Small and Personal
Free Brochure Available

800-843-3313 then at dial tone 943936

CHESAPEAKE & SHENANDOAH BICYCLE TOURING

Tour beautiful, historic Maryland, Virginia and West Virginia. Join friendly people on affordable relaxing weekend tours. Experienced leaders, comfortable lodging, delicious meals, swimming, fun! Easy to challenging routes for adults, singles, families. April to November. Rentals Available. Free brochure:
P.O. Box 21002
Washington, DC 20009
(202) 332-7186

BACKPACK COLORADO

Weekend Backpacking Trips in The Colorado Rockies

For Brochure Write:

The Mountaineer
P.O. Box 33116 Dept. 8
Northglenn, Colorado 80233-0116

Desert/Mountain Survival

4-6 day courses taught by Dave Ganci, former outdoor survival instructor for Arizona State University and the U.S. Military.

AOI
Write To
Arizona Outdoor Institute
6737 N. 18th Place, Box RA
Phoenix, AZ 85016

ALASKA

NATURE TOURS · TREKS · FLOATS
Porcupine herd caribou migration
katmai · lake clark · kenai fjords
wrangell mts · brooks range

Hugh Glass Backpacking Co., PO Box 110796-X
Anchorage, AK 99511 (907) 243-1922

BIKE & HIKE the HIGH SIERRA

2-8 day leisurely tours in California's spectacular mountains. Also Coast, Wine Country and Baja, intermediate and advanced tours. For free brochure, call/write:

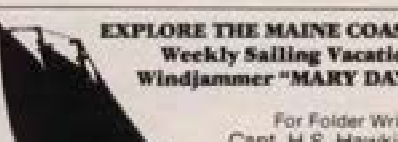
SIERRA BICYCLE TOURING CO.
P.O. Box 5463 Incline Village, NV 89450 (702) 831-3676

VERMONT BICYCLE TOURING

COZY INNS
SUPPORT VAN
BICYCLE RENTALS
SINCE 1972

Weekend & 5-day easy to challenging tours for adults & families. FREE color brochure.

VERMONT BICYCLE TOURING
Box 711-CZ 5, Bristol, VT 05443 (802) 453-4811



EXPLORE THE MAINE COAST
Weekly Sailing Vacation
Windjammer "MARY DAY"

For Folder Write:
Capt. H.S. Hawkins
Box 798T
Camden, Maine 04843
207-236-2750

BACKPACKING IN THE NORTH CASCADES

Spectacular Trips
For All Ages and Abilities

FREE COLOR CATALOG: Liberty Bell Alpine Tours
Star Route, Box 5
Marama, WA 98833
(509) 996-2250

OUR 8th YEAR

also: bicycling, kayaking, climbing, rafting, skiing

GET OFF YOUR DUFFLE!

Enjoy the freedom of backpacking the Colorado and Wyoming Rockies. The San Juans, Great Sand Dunes, Yellowstone, Absaroka, and Gros Ventre . . . Remote, spectacular destinations. Fully outfitted 5, 6 & 7 day treks. June-September. Send $1.00 for our catalog of Great Backcountry Adventures.

AMERICAN WILDERNESS EXPERIENCE
PO Box 1486 Boulder, CO 80306 (303) 444-2632

BICYCLE SKI BACKPACK

Tours for ALL Seasons

Eastern California mountains and valleys

Bristlecone Odysseys

MTS Travel
937 West Foothill Blvd.
Claremont, CA 91711

Tel: CA 800-472-4235 800-854-7979
714-621-0947

AdVenture readers want to know about your products and services. Classify!

Sierra AdVenture showcases your ad!

SALMON RIVER OUTFITTERS

RAFT & KAYAK IDAHO'S SALMON RIVER

Exciting rapids & serene floating through majestic mountain landscapes. Brochure: Box 307A, Columbia, CA 95310 209-532-2766

- HOTTEST Whitewater
- COOLEST Guides
- LOVELIEST Scenery
- MOST WANTED Rivers
- TASTIEST Meals
- FRIENDLIEST Office

Call or write for free brochures (209) 736-4677

ALASKA DISCOVERY

Alaska's oldest and most respected guiding company offers wilderness adventures by kayak, canoe, raft, backpack and skis. Completely outfitted expeditions into the wilds of Glacier Bay, Admiralty Island, W. Chichagof, Russell Fiord, Juneau Icecap, Alaska's outside coast. **Group and specialty trips** for photographers, fishermen. University credit available. Experienced, certified Alaskan guides. **Limited party size.**

For information write: P. O. Box 26SC, Gustavus, AK 99826. Ph. (907) 697-3431

HORSEBACK ADVENTURES!— Inexpensive getaway retreats 100 mi. No. of Los Angeles in Ventura County. Hourly—overnight or extended trips through Los Padres Natl. Forest. Views of Pacific Ocean from 7,509 ft. Reyes Pk. Native trout fishing & mineral hot baths along the famous Sespe River. Free color brochure. **Pardner Hicks, Cherro Grande Pack Station, Inc., 22050 Maricopa Hwy., Ojai, CA 93023 Or call (805) 646-6606**

SCHOONER TIMBERWIND

a Maine Windjammer!

$360 - $400 weekly.
For brochure
Call 207-236-9063

Capt. Bill Alexander
Box 247B, Rockport, Me. 04856

THE BEST WAY TO SEE THE GRAND CANYON ...

Rafting with
WILDERNESS WORLD
P.O. Box 310 Flagstaff, AZ 86002
(602) 774-6468

- National Park Service Concessionaire
- Sierra Club Outfitter for 12 years
- Ore., Mex. rafting; Mediterranean cruise

Send for free brochure
NAME ____
ADDRESS ____
CITY, STATE, ZIP ____

Classify yourself with an AdVenture ad

OUTDOOR EDUCATION

UNLIMITED HORIZONS SURVIVAL PROGRAM

These 6, 12, 28 day courses are taught in the spectacular Utah/Colorado border area and include desert, canyon and alpine terrain.

This summer challenge yourself!

For Free Brochure Write:
P.O. Box 5095
Durango, Colorado 81301
Please specify courses of interest
(303) 259-1754

MONTANA

Wilderness Photography Workshops

5-7 Day Horseback Adventure Trips. Lee Metcalf Wilderness, Yellowstone National Park, Red Rock Lakes National Wildlife Refuge

Wayne Scherr • (406) 586-6811 or Lakeview Guest Ranch, Dept. S, 2905 Harrison, Butte, Montana 59701.

NATIONAL OUTDOOR COLLEGE
P.O. Box 962S Fair Oaks, CA 95628 (916) 338-3600

DOCTORS

Physicians, Dentists and Veterinarians can now earn educational credits while floating wilderness rivers, bicycle touring or fishing in Alaska.

EPIC EXPEDITIONS
P.O. Box 2095
Sun Valley, ID 83353

JOIN ARCHEOLOGISTS

in the urgent task of preserving 12,000 years of human history through site excavation, research expeditions, laboratory analysis, and the study of Native American technologies. Participate in year-round, public programs at residential complexes in southwestern Colorado and the lower Illinois valley—two of the richest archeological zones in the U. S.

For free color catalog, contact:

Center for American Archeology
P. O. Box 1499 - Dept. 18
Evanston, IL 60204
312/492-5300 - call collect

WILD AMERICA IS OUR CAMPUS

Challenging career-oriented B.S., M.S. or high-school or summer expedition degree programs. Practical, 1- to 4-year, small group camping. Encounters with ecological problems, society, and self. Financial aid available. Directors: Dr. Mike & Diana Cohen, Frank & Trudy Trocco, Dan Tallman

NATIONAL AUDUBON SOCIETY EXPEDITION INSTITUTE
950 Third Ave., NY, NY 10022 (212) 546-9126

NOBODY CAN SHOW YOU THE OKEFENOKEE SWAMP LIKE WE CAN!*

We balance quiet freedom and camaraderie.
Expeditions include:
EVERGLADES • BAHAMAS • GREAT SMOKY MOUNTAINS • OKEFENOKEE • FLORIDA KEYS
KID'S SUMMER CAMPS
Ten years' experience sharing & caring; small groups.

Going there yourself would be a rich experience. Going with us will be richer!

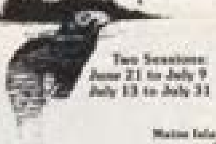
Wilderness Southeast
711-SA Sandtown Road
Savannah, GA 31410
(912) 897-5108

non-discriminatory, non-profit
*Tauspaia of Okefenokee National Wildlife Refuge

CAMP UNALAYEE

A non-profit wilderness camp for young people ages 10 to 17 is now accepting applications for summer sessions in 1984.

For further information:
415/328-1513
2253 Park Blvd., Palo Alto 94306



MAINE ISLAND ECOLOGY

Marine Biology, Botany & Ornithology on pristine Maine Island. For High School students with a genuine interest in Environmental Studies. Staff-student ratio 1:5.

Two Sessions:
June 21 to July 9
July 13 to July 31

For further information contact:
Maine Island Ecology, Academy of Natural Sciences, 19th and the Parkway, Philadelphia, Pa. 19103. (215) 299-1054

Outward Bound

THE PACIFIC CREST SCHOOL

Backpacking, mountaineering and whitewater adventure. Mojave Desert, Sierra or Cascade Mts., Deschutes or Rogue Rivers. Send for FREE CATALOG. 0110 SW Bancroft Portland, OR 97201 503-243-1993 or in Western states TOLL FREE 1-800-547-3312 Dept SC384

ASA WRIGHT NATURE CENTRE, TRINIDAD

200-acre sanctuary located in lush rain forest. 2-week summer workshops in Ecology, Botany, Ornithology, Entomology, and Nature Photography and Art. Individual and group tours year-round. See exotic South American birds, plants, butterflies, mammals, amphibians. CONTACT: WONDER BIRD TOURS W-10, 500 Fifth Avenue, New York, NY 10036. 212-840-5961.

Travel Programs for Photographers

Two and three-week expeditions, tours, cruises and workshops in exotic countries, each led by the world's greatest photographers. Programs for basic and advanced photographers in color and b/w. College credit and complete travel packages provided.

Japan with Ernst Haas. . **Ireland** with Paul Caponigro. . **Switzerland** with John Sexton . . Cruise the coast of **Alaska** with five famous photographers. . **France** with Craig Stevens. . . **Italian** Photographic Festival. . A voyage down **The Nile**. . Underwater photography in the **Caribbean** with David and Anne Doubilet.

Write for a complete catalogue.

Organized and sponsored by photography's leading summer school:

The Maine Photographic **WORKSHOPS**

Rockport, ME 04856 (207) 236-8581

Sierra Club members turn to AdVenture for ideas on travel and vacations as well as mail-order products & services.

COLORADO OUTWARD BOUND SCHOOL

Outdoor Excitement!
- Backpacking - Mountaineering
- Whitewater Rafting

14 and up - No experience necessary

For a 4-Color Brochure, contact:
945 Pennsylvania, Dept. SI-84
Denver, CO 80203 (303) 837-0880

FOUR CORNERS KAYAK SCHOOL

Nancy Wiley and staff can get 1st timers started or can help experts get rid of that bad habit. Equipment rentals and sales. Package deals can include instructions. Free catalog. **(303) 259-3893**

Box 379 Durango, Co 81301

Redwood National Park
SUMMER FIELD SEMINARS
Bear ecology, local bird identification, stream ecology, coastal geology, outdoor art & photography, Native American cultures, natural/human history.

College Credit at no cost to Calif. residents.

Contact: College of the Redwoods, 883 W. Washington Bl., Crescent City, CA 95531. (707) 464-7457

VACATION RETREATS

ALASKA'S BIRDS—BEARS—FLOWERS

5 or 10 Day Guided Natural History Vacations. Sincere informal hospitality in a spectacular coastal wilderness and mountain panorama.

Experience 30 foot tides, prolific seabird and marine life, nesting Bald Eagles, untracked beaches, and the world's largest concentration of Brown Bears, wonderful fishing, and glorious profusions of Alpine and Tundra flowers.

Cozy comfort, gourmet meals. Personal guiding with licensed Naturalist Guides.

8 guests only for staff of 8. An in-depth destination at Alaska's best wilderness lodge. $1500 to $2250. Write for brochure.

The McBrides, Kachemak Bay Wilderness Lodge, Box 956, Homer, AK. 99603
Phone 907-235-8910

WYOMING MOUNTAIN HOME

Vacation rentals avail. Jun 1-Oct 15. Lovely Log Cabin (sleeps 6), superbly situated on 3,000-acre private preserve bordering Shoshone Nat'l For. Trout streams, elk, moose, etc. At 7800 feet, overlooks high peaks. John Goetz, 4525 York Ave. So., Mpls. 55410. (612-927-0865; 333-8308).

KAUAI BEACHFRONT

Hanalei Beachfront resort. 50 2-bedroom suites, full kitchens, pool, jacuzzi, lush gardens. Nearby golf, tennis, hiking.

TOLL FREE (800) 421-0767, Calif. (800) 252-0327
P.O. Box 206-E, Hanalei, HI 96714 / (808) 826-6235

Hanalei Colony Resort

Sierra Club membership/circulation has increased to 350,000 and is still growing. Reach them in AdVenture.

Eight inns are organized to offer hiking on an 80 mile stretch of Vermont's Long Trail. Delightful country meals and comfortable beds await at each day's-end.

For brochure

Country Inns Along the Trail
Churchill House Inn, Box HS
RD 3, Brandon, VT 05733
(802) 247-3300

ALPINE COUNTY—MARKLEEVILLE

43.08- acres at 6500 feet in Toiyabe National Forest adjacent proposed Raymond Peak Wilderness Area. Heavily forested level to steep terrain with year-round springs and bordering permanent creek. Property shared by mountain lions, bears, bobcats, deer, coyotes, porcupines. Trail access only (1½ miles to road). Owner seeks purchaser interested in maintaining solitude, quiet, and natural state. $75,000. Call John York to see property. 702-882-9202/ext. 255 weekdays. 916-694-2442 weekends.

KAUAI VACATION HOME

2 Bdrms, 2½ Bths. Fully furnished. Relax, Snorkel on Beautiful Beaches, hike Na Pali Trails.

Reasonable weekly/monthly rates.

P.O. Box 2221, Saratoga, CA 95070
(213) 514-2761 or (408) 241-4286

RIDE WITH THE COWBOYS!

Ride with cowboys on old-style, working cow ranch. Brochure.

TX RANCH
Box 453, Lovell, WY 82431
(406) 484-2583 eves.

INTRODUCING THE CARIBBEAN RESORT CAMPING ALTERNATIVE Fully furnished three room canvas cottages with your own private sundeck in National Park on St. John, U.S. Virgin Islands. Secluded soft sandy beach; swimming, snorkeling, sailing and SCUBA. "Ecological showplace" . . . N.Y. Times. For low package price information and free brochure call the Maho Bay Representative toll-free (800) 235-1216 (in CT (203) 622-8989) Connecticut Travel Center, Dept. S-1, 405 Greenwich Av., Greenwich, CT 06830.

LLAMA PACK TRIPS

Wilderness trips with Llamas in N. Cal. Dine on delicious natural gourmet meals. Let us show you sights to inspire you with nature's PEACE and BEAUTY.

3R RANCH
(916) 926-5794
P.O. Box 1079 Dept. S Mt. Shasta CA 96067

CLOTHING/EQUIPMENT

ANCIENT ANASAZI ROCKART

Jim & Betsy

FOUR CORNERS MARINE

We aren't all things to all people but we sell and rent boats and river-running equipment that work. Package deals can include instructions. Free catalog.

Box 379, Durango, Co 81301
(303) 259-3893

LEG POUCH
Money, Credit Cards, Passport
- SUPER SAFE -

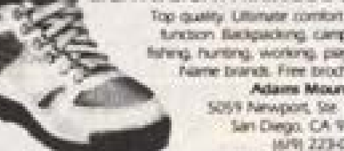
FULL REFUND if not 100% convinced

Send $9.90 Ea. ...or request brochure...

LEG-POUCH # 6
17802 Cotter Pl
Encino CA 91436

FEAR NO WEEVIL

$9 PPD.



LIGHTWEIGHT HIKING BOOTS

Top quality. Ultimate comfort and function. Backpacking, camping, fishing, hunting, working, playing! Name brands. Free brochure.

Adams Mountain
5059 Newport, Ste. 101C
San Diego, CA 92107
(619) 223-0232

COME HOME TO COTTON

Let your body breathe in Deva's handcrafted clothes of lushly textured, pre-shrunk cotton.

All styles offered in: ***Natural • Navy Lilac • Pink • Plum • Russet • Sky Blue • Yellow • Black***

A.	Deva Jacket	$26
B.	Lotus Pants	$21
C.	Sun Shirt	$20
D.	Deva Pants	$19

All prices postpaid. State hip/waist, bust/chest measurements. Money-back Guarantee

DEVA, a Cottage Industry
Box SXE, Burkittsville, MD 21718
M/C VISA orders: (301) 473-4900

FREE CATALOGUE & SWATCHES

FREE CATALOG! 22 Great Environmental, Wildlife, and Anti-nuke Designs! $8.25 each; less with bulk orders. Satisfaction guaranteed. 10% of profits go to environmental causes. Share the Earth!
JIM MORRIS P.O. BOX 2308 DEPT. BE4
(303) 444-6430 BOULDER, COLO. 80306

ENVIRONMENTAL
T-SHIRTS

BUSHNELL BINOCULARS AT DISCOUNT PRICES!!!
All types, Zooms, Wide Angles, Compacts, Waterproofs for outdoor use! Send for FREE 16-page Color Brochure & Prices - TODAY!
ERICSON MARKETING CO.
P.O. Box 1306, Bryn Mawr, PA 19010

ATHLETIC SANDALS

★ LAND & WATER ★
HIKING, RIVER FORDING
RUNNING, RAFTING
DANCING, EXERCISING
BOATING (DECK & SEA)

250 F N. HWY. 101
ENCINITAS, CA 92024

THE RUNNING SHOE SANDAL THAT WILL OUTLAST A BOOT!

AERIE DESIGN Since 1976

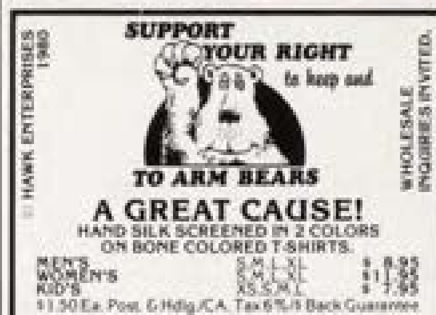
Wildlife T-SHIRTS & GRAPHICS

Send for free catalog and full color, 18 x 24, snowy owl poster. Share of profits goes to wildlife rescue.

141 Blackberry Inn Rd., Weaverville, NC 28787
704-645-3285

Put Some AdVenture Into Your Life

For information on space & production charges, call or write: Lorraine Vallejo, Sierra AdVenture, 530 Bush St., S.F., CA 94108, (415) 981-8634. All charges pre-paid.



A GREAT CAUSE!
HAND SILK SCREENED IN 2 COLORS ON BONE COLORED T-SHIRTS.

MEN'S	S.M.L.XL	$ 8.95
WOMEN'S	S.M.L.XL	$11.95
KID'S	XS.S.M.L.	$ 7.95

$1.50 Ea. Post. & Hdlg./CA. Tax 6%/$ Back Guarantee

HAWK ENTERPRISES
P.O. BOX 40549, DEPT. SC376
SAN FRANCISCO, CA 94140

SEND 50¢ FOR UNIQUE CATALOG

PRODUCTS/SERVICES

WILDERNESS PRESS
OUTDOOR BOOKS

Write for free catalog

2440A Bancroft Berkeley, CA 94704

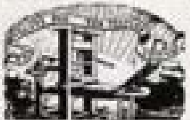
Adirondack Guidebooks and Maps

Write for free catalog.
Adirondack Mountain Club
172-S Ridge St.
Glens Falls, N.Y. 12801
(518) 793-7737

BEAUTIFULLY ILLUSTRATED WALL POSTER

MUSHROOMS of NORTH AMERICA
SCIENTIFICALLY ACCURATE
EDIBLE & POISONOUS SPECIES
Write for details:
SEA OTTER PRESS, Box 2045, SEATTLE, WA 98111

RECYCLED PAPER



PRINTING ON 100% RECYCLED PAPER
Reduces Waste ● Saves Energy ● Protects Resources ●

Order now—500 Printed LETTERHEADS: White, $32.20; Beige $30.95. 500 Printed ENVELOPES: White, $33.25; Beige $36.53. 100% RECYCLED 8½ × 11 inch BLANK SHEETS: White, $13.20/500; Beige, $12.80/500.

Satisfaction guaranteed. Free samples, catalogue.

FRIENDS OF THE EARTH
2007 Highway 50 West ● P.O. Box 1866
Fairview Heights, Illinois 62208
(618) 632-9337

RED, WHITE & BLUE BUMPER STICKERS
LOWE CO. $2. each
P O B #42812 $7 for 4
LOS ANGELES, CA 90042
California residents add 6½% sales tax

TRAVELING MUSIC

Pack along **Traveler's Advisory** with your walkman and add transforming, scenic, rhythmic, melodic dimensions to your adventures. Send $8 to **Cobalt** p.o. box 26853 L.A. CA 90026. Indicate Dolby or Non-Dolby.

ENVIRONMENTAL OPPORTUNITIES

Monthly bulletin lists jobs throughout the U.S. Write for FREE descriptive brochure: EOS P.O. Box 670, Walpole, NH 03608.

BUMPERSTICKERS!
Any Message You Want
ORDER 1 or 1000
Call toll-free for flyer
1-800-548-7216

Next time you're in San Francisco, visit our store.

We have a complete selection of environmental books, trail guides, Totebooks® and of course, the Sierra Club cup. We're on the 1st floor of the Club Headquarters at 530 Bush Street.

10–5:30, Monday–Friday.

Sierra Club Store

it feels good if it's WOOD
fine paddles by

Green Lake West, Route 3/Box 422
Markesan, Wisconsin 53946
Phone (414) 398-2926 or 398-3724

QUESTIONS & ANSWERS

Q I had heard that auto traffic would soon be banned from Yosemite National Park. When is this going to happen? (STEPHEN M. H. BRAITMAN, SAN FRANCISCO, CALIF.)

A The National Park Service has attempted to address the problem of vehicular traffic within the park on several occasions. Master plans prepared in 1971 and 1975 called for removing nonessential facilities from central areas in addition to an eventual ban on all auto traffic. (The Sierra Club was an active contributor to the public-comment phases of these plans.) But the situation has yet to improve very much, simply because no alternatives to private transportation have been developed.

Ninety percent of the visitors to Yosemite arrive by private auto. If cars were banned, a greatly expanded bus system (or a totally new light-rail system) would be required, says the Park Service. Expensive satellite transit terminals and huge parking lots would thus be necessary. Increased security would be required to police the satellite lots, and a more efficient transit system between the park and outlying cities (e.g., Merced) would need to be developed. The NPS cites the physical design problems and the exorbitant costs of such improvements as major obstacles to their implementation.

The Park Service continues to investigate strategies to reduce the impact of development within the park. Plans to construct a new administration building in El Portal, 14 miles from Yosemite Valley, are being considered. (The present administration building would be converted to a park museum.) A decentralization plan is also in the works. Only three square miles of the 1,200 that comprise Yosemite National Park are currently developed. Visitors are encouraged to explore alternatives to staying in the valley itself, such as campgrounds at Wawona, Crane Flat, and Tuolumne Meadows. A 17-percent reduction in the number of overnight visitors to the park (capacity is now 8,500) has also been proposed.

Sierra encourages its readers to take this opportunity to learn more about the Sierra Club and its activities. If you have a question you'd like answered, send it along with your chapter affiliation and address to *Sierra Q & A*, 530 Bush St., San Francisco, CA 94108. We will respond to as many questions as space allows.

Illustration by Phil Frank

Q: How is the Sierra Club working with labor unions to tackle the problem of carcinogens and poisons in the workplace? (JULIE CUNNINGHAM, POUGHKEEPSIE, N.Y.)

A: At a time when the scientific community is becoming increasingly alarmed by the negative effects of industrial poisons and carcinogens on workers and the community at large, the Reagan administration has adopted a policy that directs resources away from the development of safeguards against these lethal chemicals. To reverse this trend, the OSHA/Environmental Network—a broad coalition of labor and environmental organizations committed to protecting the environmental health of the workforce and the community—was formed in January 1981.

Under the auspices of the network, an important agreement was reached between the Sierra Club (and other environmental groups) and the Industrial Union Department of the AFL-CIO. The environmental groups agreed to support the enforcement and expansion of "toxic watch" laws, while labor agreed to support the Club's position on strengthening the Clean Air Act.

More recently, the network's executive committee agreed to a broad program for 1984 that includes a new toxic-watch initiative. The committee recommended involving local environmental, civic, and labor organizations in a coordinated effort to bring toxic pollution under control through citizen action. This state-by-state program will involve monitoring of state and federal enforcement activities, an ongoing exchange of technical information, coordinated legislative activity, and an information clearinghouse for reporting significant incidents and tracking control efforts.

Q: Was the Sierra Club the world's first private conservation organization? (MORTON STEINMAN, COEUR D'ALENE, IDAHO)

A: No. The Sierra Club is predated by the Appalachian Mountain Club, organized in Boston early in 1876. Under its first president, E.C. Pickering, the AMC's original aim was the "advancement of the interests of those who visit the mountains of New England and adjacent regions, whether for the purpose of scientific research or summer recreation." Today the AMC continues to thrive as a nonprofit organization dedicated to the preservation and conservation of our mountains and wilderness. Such modern issues as acid rain and the protection of endangered species now concern the club, but the focus of its activities continues to be the cultivation of interest in nature and the environment.

Q: More and more frequently, it seems, the Forest Service is giving consideration to increasing the use of aerial spraying of herbicides to "manage" vegetation during reforestation efforts. What's the Sierra Club's position on this sort of thing? (ANNA RAMSTEAD, LOMA PRIETA CHAPTER, MOSS BEACH, CALIF.)

A: The Club is strongly opposed to aerial spraying of herbicides. Given the wide range of uncertainty regarding the toxicity of herbicides, any application of them should be made with as much caution as possible, and should be considered only when manual or mechanical techniques are not feasible, and when objectives of their use are clearly delineated. Aerial application risks the uncontrolled drift of herbicides onto sensitive areas; the potential danger of the contamination of human water supplies is unacceptable.

The shadow of your smile.

The twinkle in his eye. The crinkle of his nose. Now you can capture all his most loving glances with Kodacolor VR 200 film. Even in shifting light, or with sudden movement. It's the most versatile color print film ever from Kodak. After all, he's not just another pretty face.

Kodak

Because time goes by.

Can lightweight, foul weather gear this waterproof really reduce condensation?

Peter Storm pioneered 100% waterproof, ultra lightweight foul weather gear. Now in their own proofing factory, Peter Storm has made a major breakthrough. They've created an exclusive 100% waterproof finish that is 'water vapour permeable'. So water can't get in, but sweat can get out. Condensation is reduced to add extra comfort to the high performance you expect from Peter Storm.
Tops in jacket length & three quarter length, plus overtrousers.
Another first from Peter Storm – with no-one in second place.

Peter Storm®

Makes great looking sportsmen

Peter Storm makes 5 different types of foul weather clothing, plus life jackets, thermal clothing, sports shirts, proofed sweaters, socks and sports trousers. At leading climbing, marine and sports shops.