

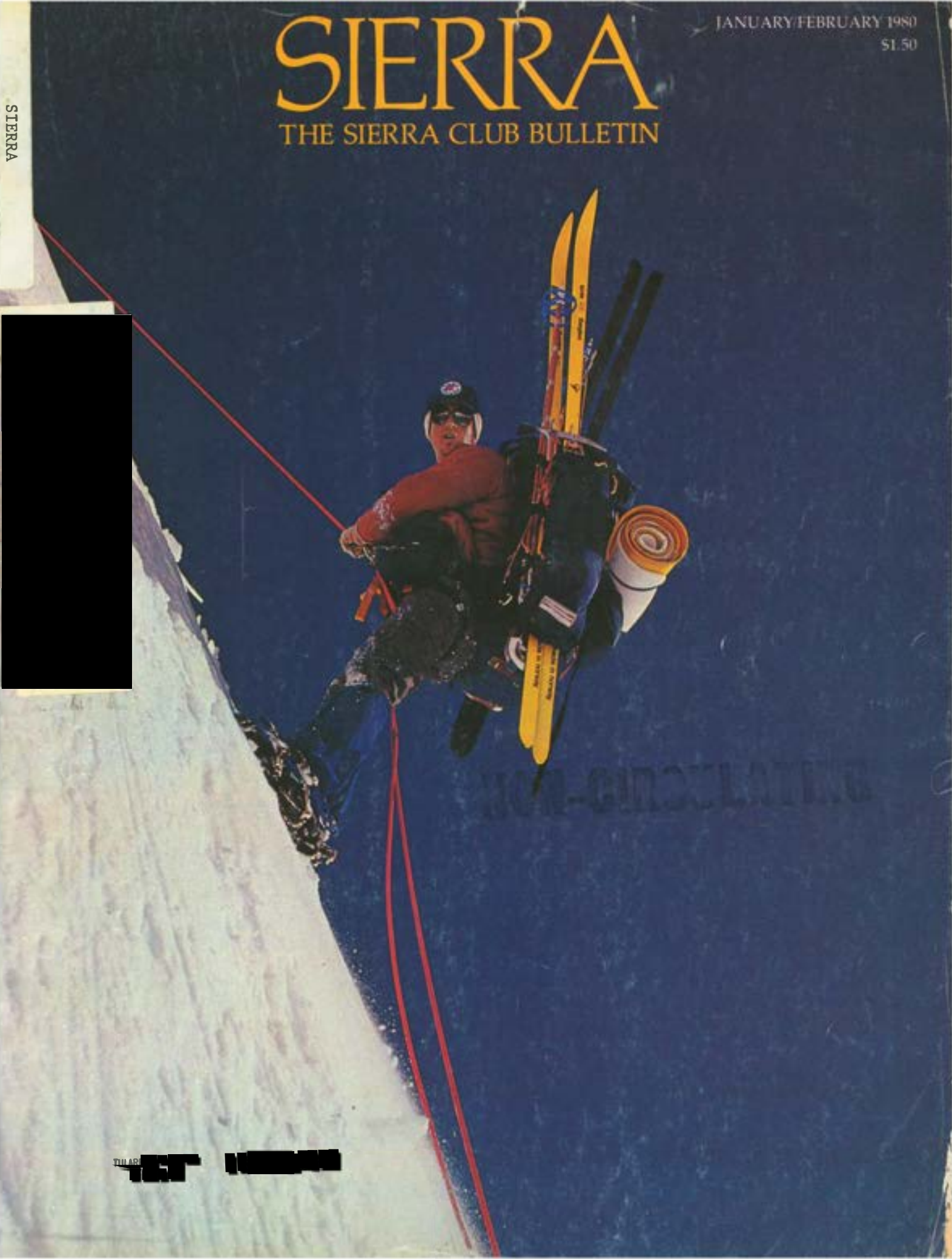
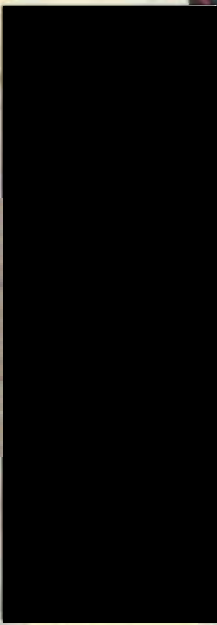
SIERRA

THE SIERRA CLUB BULLETIN

JANUARY/FEBRUARY 1980

\$1.50

SIERRA



NOT-CIRCULATING

SIERRA CLUB

Thinsulate
THERMAL INSULATION



New Deal From JanSport

Take off your tired old parka—JanSport's got a New Deal for you. Our short-waisted, close-fitting New Deal jacket is filled with Thinsulate® for phenomenal warmth and insulation without bulk. Its patented micro-fibers trap more "boundary" air, yet absorb less than one percent of their own weight in water. And you stay even warmer and drier because we enclose the Thinsulate® in a rugged 60/40 outer shell and soft Trinyl lining.



New Deal Jacket

Snap pockets, a tailored fit, and a high, contoured collar complete the New Deal.

For mountain hiking, Alpine skiing, woodlands camping, and the all-around outdoor lifestyle, both men's and women's models come in a variety of wilderness colors. Get a New Deal from your local JanSport dealer.

Or send for our latest catalog:
Department S, Paine Field Industrial
Park, Everett,
Washington 98204.

JANSPORT

Founded in 1892, the Sierra Club works in the United States and other countries 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 a basic part of the Club's program. All are invited to participate in its activities, which include programs to "... study, explore, and enjoy wildlands."

Directors

Theodore A. Snyder, Jr.	<i>President</i>
Joseph Fontaine	<i>Vice-President</i>
Richard A. Cellarius	<i>Secretary</i>
Denny Shaffer	<i>Treasurer</i>
Helen K. Burke	<i>Fifth Officer</i>
Phillip S. Berry	Leslie V. Reid
Ann Sheldon Duff	Nicholas A. Robinson
Richard Fiddler	Lowell Smith
Marty J. Fluharty	Sanford Tepfer
William Futrell	Ellen Winchester

Richard M. Leonard *Honorary President*

Regional Vice Presidents

Peter Burke	Ray Payne
Doris Falkenheimer	Mark Palmer
Dudley Gilbert	Howard Saxion
Mary Hay	Peter Wyman
Norman E. Nelson	Bill Yerkes

Michael McCloskey *Executive Director*

SIERRA Staff

Frances Gendlin	<i>Editor</i>
David Gancher	<i>Managing Editor</i>
Carey Charlesworth	<i>Assistant Editor</i>
Gene Coan	<i>News Editor</i>
Richard Dimithian	<i>Art Director</i>
Gerald Klein	<i>Production Coordinator</i>
Vivi Lazarus	<i>Advertising Manager</i>
Lorraine Vallejo	<i>Assistant</i>

United States offices: Alaska: 545 E. 4th Ave., #5, Anchorage, AK 99501; New York & International: 800 Second Ave., New York, NY 10017; Legal Defense Fund: 311 California St., San Francisco, CA 94104; Midwest: 140 W. Gorham St., Madison, WI 53703; Northwest: 4534 University Way NE, Seattle, WA 98105; Southern California: 2410 Beverly Blvd., Los Angeles, CA 90057; Southwest: 338 East De Vargas, Santa Fe, NM 87501; Washington, D.C.: 330 Pennsylvania Ave., SE, Washington, D.C. 20003; Wyoming and Northern Great Plains: Box 1078, Lander, WY 82520.

Canadian chapters: Western Canada Chapter, Box 35520, Station E, Vancouver, B.C. V6M 8G9 or Ontario Chapter, c/o National & Provincial Parks Assn., 47 Colborne St., Toronto, Ontario, M5E 1E3.

SIERRA (USPS 495-920) (ISSN 0161-7362), published bimonthly, is the official magazine of the Sierra Club, 530 Bush St., San Francisco, California 94108, (415) 981-8634. Annual Dues are \$25 of which \$3.00 is for subscription to *Sierra* (Nonmember subscription: one year \$8.00, three years \$20; foreign \$12; single copy \$1.50). Second-class postage paid at San Francisco, California, and additional mailing offices. Copyright © 1980 by the Sierra Club. No part of the contents of this magazine may be reproduced without the written consent of *Sierra*. 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 an address label from a recent issue, if possible.

Editorial and business offices: 530 Bush Street, San Francisco, CA 94108. Unsolicited manuscripts must be accompanied by a stamped, self-addressed envelope.

Advertising: *Ecology Sports East:* William H. Fields III, 224 Mile Creek Rd., Old Lyme, CT 06371, (203) 434-8310. *Pacific States:* Cindy Anderson, 97 Clark St., San Rafael, CA 94901, (415) 454-1862. *Mountain States and Midwest:* Kate Lennon, 5256 James Ave. South, Minneapolis, MN 55419, (612) 926-0041; Denver, (303) 623-8620. *General Advertising East and Midwest:* Erwin Baker and Associates, 20 Evergreen Place, East Orange, NJ 07018, (201) 673-3950.

SIERRA

THE SIERRA CLUB BULLETIN

JANUARY/FEBRUARY 1980

VOLUME 65/NUMBER 1

- | | | |
|----|---|--------------------------------|
| 8 | The New Decade—Dawn or Dusk? | <i>Brock Evans</i> |
| 11 | Energy 1979—What Happened and Why | <i>Gene Coan and Carl Pope</i> |
| 14 | The Year of the Coast: 1980
A New Coalition for the Eighties | |
| 18 | A Conversation with Rick Sutherland | <i>Frances Gendlin</i> |
| 23 | Skiing a Distant Circle
An Adventure on Mt. McKinley | <i>Galen Rowell</i> |
| 29 | The Sagebrush Rebellion | <i>Russ Shay</i> |
| 34 | 1980 Sierra Club Outings | |
| 40 | Oaklandtopia
A Cheery History of the Future | <i>Richard Albert, Jr.</i> |
| 48 | Iceland | <i>J. Russell Boulding</i> |
| 52 | Finding the Lost Coast | <i>Julie Verran</i> |
| 53 | The Great Northeast Railway Dilemma | <i>Neil Goldstein</i> |
| 55 | Step by Step Through the Grand Canyon | <i>William Kemsley, Jr.</i> |

Departments

- | | | |
|----|--|------------------------|
| 4 | Letters | |
| | Books | |
| 58 | Concern for the Coasts: <i>The Beaches Are Moving</i> , by Wallace Kaufman and Orrin Pilkey | <i>Eric Salzman</i> |
| 60 | Essays and Art: Analyzing California's Water: <i>The California Water Atlas</i> , edited by William L. Kahrl; <i>Essays on Land, Water and the Law in California</i> , by Paul S. Taylor | <i>Marc Reisner</i> |
| 63 | Regulating Pesticides: What Have We Learned? <i>The Pendulum and the Toxic Cloud</i> , by Thomas Whiteside; <i>The Least Is Best Pesticide Strategy</i> , edited by Jerome Goldstein with Rill Ann Goldstein | <i>Odom Fanning</i> |
| 66 | For Younger Readers
Winter Energy Maze | |
| 67 | The Observer | <i>Robert A. Irwin</i> |
| 70 | News | |

Cover: Rappelling the ice face of Mt. McKinley's East Buttress. Photograph by Galen Rowell.



Platypuses Are an Exception

In the November/December *Sierra*, I noticed that "Mammals and Their Families" makes a false statement: "All mammals including humans give birth to live babies." Duck-billed platypuses are mammals, and they lay eggs.

Tommy Insel, age 6
Bloomington, Illinois

The Editor replies:

Right you are. The Echidna, or spiny anteater, is the only other mammal that lays eggs and nurses its young.

Avoiding Groundfall

I am 17 and a beginner at climbing. After reading "Groundfall," by William G. Higgins (November/December), it hit me just how dangerous climbing can be. I do a lot of dumb things, such as unsafe climbing with a rope. It occurred to me that I could have been the guy who died because he didn't have any protection points. Mr. Higgins, thanks for opening my eyes.

Joe Graves
Capital Heights, Maryland

Flashlight Caving

"Caving," by Ruth Rudner (September/October), communicates some misinformation that could be dangerous to anyone who goes caving as a result of reading the article. In both the text and the illustration, the explorers use flashlights to explore a cave.

"Flashlight caving" is extremely dangerous; flashlights are notoriously temperamental, and they are easily dropped and smashed or lost. They occupy a hand best used for balance. Last, they don't really give a lot of light.

Losing light is a serious problem in a cave, where it's totally dark, so dark that your eyes will not eventually adjust. People have lost light no more than a couple of hundred feet from the entrance of a cave and been forced to wait hours for rescue.

Responsible cavers carry at least three independent light sources. Even in large parties, where numbers give a measure

of security, this practice is rarely relaxed.

Caving, like backpacking or rock-climbing or river-running, can be safe and enjoyable with the proper skill and knowledge. Caving with only a flashlight is like river-running without a life jacket or rock-climbing without a belayer.

Nelson G. Highley
Charlotte, North Carolina

If Ruth Rudner's story about the beauty and wonder of caving piqued *Sierra* readers' interest about the safety and conservation aspects as well, they can get in touch with the National Speleological Society, Cave Ave., Huntsville, AL 35810. NSS arranges novice trips, skills training and informational programs, and it publishes on all facets of caving.

Ginger L. Ohori
Morristown, New Jersey

Amputation Threatens Balboa Park

Congratulations are in order for John Hart's article on the nation's efforts for our urban parks ("Parks for the People," September/October). These efforts, however, are being set back by the U.S. Navy and by California Representative Bob Wilson (R-San Diego). They have asked Congress for authorization to condemn 39 acres of unspoiled natural canyon land in historic Balboa Park—located in the heart of San Diego—in order to build the world's largest military medical facility, even though an acceptable site for the hospital has been located outside the park. The Navy proposes to trade a few old buildings, parking lots and a patch of land for the parkland appraised—in 1960!—at approximately \$1 million an acre.

In other words, the Navy wants to destroy San Diego parkland worth twice the amount Congress allocated for the entire country's urban parks program in the 1978 Omnibus Parks Act. Club members who support urban parks should write their representatives and the White

House opposing any condemnation of Balboa Park or any appropriation for a hospital in the park.

Lyndelle Fairlie
San Diego, California

Dioxin Herbicide Ban

The public television stations recently broadcast "A Plague on Our Children," a program on the timber industry's continued use of dioxin herbicides such as TCDD and 2,4,5-T in the northwestern United States.

The Boise-Cascade Corporation and the Weyerhaeuser Corporation spray these chemicals from the air to kill broadleaf vegetation in the conifer forests they manage for harvest. (The conifers are partially tolerant to these sprays.) The Forest Service and the big timber companies insist that the benefits from the sprays are substantial and indispensable.

But dioxin in these herbicides has been linked with birth defects and cancer. Women in Del Norte County, California, living near the forests being sprayed experienced repeated miscarriages and birth defects; forestry workers came down with strange flu-like symptoms.

The Forest Service and the timber industry claim the herbicides are safe in the amounts applied. Yet the tests backing these claims were done by the Dow Chemical Company, one of the principal manufacturers of the sprays—there is obvious conflict of interest through the whole process. Associates of mine who walked in some forests in Northern California found areas where even the conifers were dead from these "safe" levels of dioxin use.

The EPA has instituted a partial and temporary ban on the use of these herbicides, yet today they are widely applied in remote areas of the Northwest and for range management in the intermountain West.

I urge *Sierra* Club members to write their senators and representatives, pressing them to legislate a complete and permanent ban on these poisons. Their sales overseas by American corporations should be scrutinized also.

Thomas E. Ribe
Felton, California

Fill out this coupon and save the children

Complete this simple questionnaire, and befriend a needy child through Save the Children. For only fifty-two cents a day, your money, combined with that of other sponsors, can breathe new life into an impoverished village... help hardworking people in their fight for dignity... turn despair into hope for a child who has known only disaster. Fifty-two cents may not buy much where you live. But for the poorest of the poor where the need is so desperate, it can work miracles.

SCB 1/80

My Name Is _____
(please print)

Address _____

City _____ State _____ Zip _____

Tell us how you want to help, by answering these questions:

1. What kind of child would you like to help?

- Boy Girl No preference

2. What geographical area are you interested in?

Urgent need exists in all the areas listed below, especially overseas. If you have a strong preference for a particular location, check the area of your choice. If not, won't you please let us assign a child where the need is greatest?

- Certainly. Choose a child for me in an area of greatest need.

- | | | |
|---|--|---|
| <input type="checkbox"/> I strongly prefer: | <input type="checkbox"/> Dominican Republic | <input type="checkbox"/> Korea |
| <input type="checkbox"/> Africa | <input type="checkbox"/> Honduras | <input type="checkbox"/> Lebanon |
| <input type="checkbox"/> Bangladesh | <input type="checkbox"/> India (U.S.) | <input type="checkbox"/> Mediterranean |
| <input type="checkbox"/> Chicano (U.S.) | <input type="checkbox"/> Indonesia | <input type="checkbox"/> Mexico |
| <input type="checkbox"/> Colombia | <input type="checkbox"/> Inner Cities (U.S.) | <input type="checkbox"/> Southern States (U.S.) |
| | <input type="checkbox"/> Israel | <input type="checkbox"/> Sri Lanka (Ceylon) |

3. Would you like a picture of your sponsored child?

Shortly after we select a child for you, we can send you a photograph and brief personal history, if you desire.

- Yes No

4. Would you like to exchange correspondence?

If desired, correspondence can build a meaningful one-to-one relationship and provide a unique educational experience for the sponsored child. In areas where illiteracy is high, a village representative will keep you informed of the progress your child is making. Translations, where necessary, are supplied by Save the Children.

- Yes No

5. Would you like information about the child's community?

Several times a year you can receive detailed reports on the activities and projects being undertaken in the community to benefit your sponsored child. These community reports show how your money is being used most effectively for permanent improvements to the child's environment—for health care, education, food production, nutrition, and community training. Would you like to receive such information?

- Yes No

6. How do you wish to send your sponsorship contribution?

Enclosed is my check for \$_____.

- Monthly, \$16 Semi-annually, \$96
 Quarterly, \$48 Annually, \$192

7. Do you wish verification of Save the Children credentials?

Save the Children is indeed proud of the handling of its funds. Based on last year's audit, an exceptionally large percentage (80.3%) of each dollar spent was used for program services and direct aid to children and their communities. Due to volunteered labor and materials, your donation provides your sponsored child with benefits worth many times your total gift. Would you like to receive an informative Annual Report (including a summary financial statement)?

- Yes No

(A complete audit statement is available upon request.)

8. Would you rather make a contribution than become a sponsor of an individual child at this time?

- Yes, enclosed is my contribution of \$_____
 Check here for general information about our unique programs for aiding impoverished children.



Mail to:
David L. Guyer, President

Save the Children.

50 Wilton Road, Westport, Connecticut 06880

YOUR SPONSORSHIP PAYMENTS AND CONTRIBUTIONS ARE U.S. INCOME TAX DEDUCTIBLE

Established 1932. The original U.S. child sponsorship agency. Member of the American Council of Voluntary Agencies for Foreign Service.

photo: Bentley Kassal

How to explain to your why you're twice as

The Science of Cold.

Anyone who's spent time outdoors in the winter knows that cold is uncomfortable. But not everyone realizes how easily that discomfort can lead to impaired body functions and even death. That's because man is a homeotherm and can tolerate variations of only a few degrees in internal temperature.

Clothing is really the only protection we have against the elements. And to measure the value of clothing, the U.S. Army has developed clo units, similar to R units for measuring housing insulation. One clo is the value of a wool business suit. Six clo is about the value of an arctic survival outfit. Generally speaking, an active sportsman should be warm in clothing rated at two clo when the temperature is between 0° and 20°F.

Activity levels have a lot to do with the clo value required for comfort. The greater the rate of metabolism, the greater the amount of heat generated by the body. A brisk walk will give you four times the metabolic rate you'll experience while sitting. Running will step up your metabolic rate to eight times what you'll experience while sitting.

But you can only remain active for so long. And even while you're active, you shouldn't underestimate the



importance of effective clothing insulation.

The Science of Thinsulate.

Thinsulate Insulation is not a natural fiber, like down. And it's not a typical synthetic, like fiberfill. It's an entirely new breakthrough from 3M.

Thinsulate is made up of microfibers that are 1/10th the size of typical synthetic fibers. They have about 20 times more surface area, per unit weight, and therefore about 20 times more ability to trap surface air. Surface air is a very effective insulator and trapping it is the basic idea behind most clothing insulations.

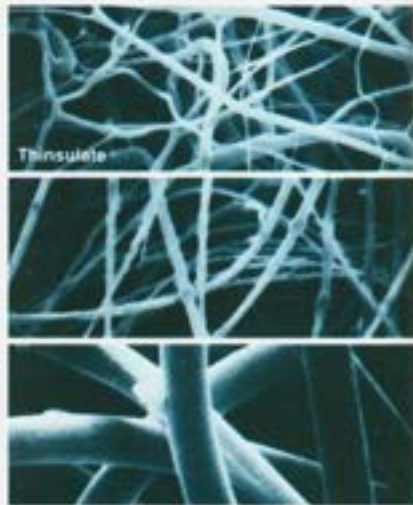
What all this means is that, inch for inch, Thinsulate is nearly twice as warm as any other clothing insulation, including down.

If a given thickness of down has a clo value of 1.0, an equal thickness of typical synthetic insulation will measure .9 clo. However, an equal thickness of Thinsulate will have a clo rating of 1.8, nearly twice as high.

And Thinsulate will maintain most of its insulation value even in damp conditions, because unlike down, its fibers absorb less than 1% of their weight in water. Thinsulate is also easily washable.

Scientific Evidence.

3M conducted a number of tests proving that Thinsulate insulates about twice as well.



Thinsulate, eiderdown and polyester fiberfill. Each is equally magnified several hundred times for comparison.

backpacking buddies warm as they are.

Actually, we used just about every scientific insulation test available, including laboratory-controlled field tests with Alaskan pipeline workers, airline baggage handlers and ski patrol members.

One evaluation shows quite graphically the superiority of Thinsulate. It's called thermography and it consists of an infrared camera that shows heat loss on a color TV monitor. This technique is used by utility companies to show heat loss areas in poorly insulated houses.

The infrared photo included here shows a model wearing a specially tailored jacket. The right half is insulated with Thinsulate. The left half is insulated with an equal thickness of a typical synthetic.



The red and yellow areas on the left indicate more heat loss. And of course, the more heat loss you experience, the less time you'll want to spend outdoors.

Unscientific Evidence.

The best indication of Thinsulate's value may be the people who have already become believers. People like the Vail Ski Patrol.

And people like professional outdoor writer, Steve Netherby. As an independent critic of products designed for the outdoors, Steve has proven to be brutally honest with his readers. This is what he had to say about Thinsulate in an article written for *Field & Stream*: "To make a long trail test short, I found the performance of these Thinsulate-insulated garments astounding. I never noticed my body losing any heat above the waist. I've

never felt that way even when using a down parka. And my tests included standing still and sitting for long periods in wind and cold. My testing gave me the impression that Thinsulate is a stunning technological achievement. And it appears the stuff will hold up to rough treatment too."

Form follows function.

Thinsulate is not only warm and durable, it's becoming more and more adaptable to a variety of outdoor needs. That's why more and more of the finest names in outerwear are already using Thinsulate. Annie Rooney. Altra. Alpine Products. Alti-Wear. Banana. Black Ice. Blue Puma. Camp 7. Caribou. Cirrus. Columbia Sportswear. EXIT. Grandoe. Head. JanSport. Mountain Equipment. North Face. Pacific/Ascente. Pak-Foam. Powderhorn. Profile. REI. Sojourn Designs. Sierra Designs. Swing West. Trailwise. Woolrich. And a growing list of many more.

You can call us, toll-free, at 800-358-9150 for more information about where you can buy Thinsulate. In California, call 800-862-4999. Or write us at Thinsulate, Box 1, 3M Center 223, 6SW, St. Paul, Minn. 55101. In Canada, write 3M Canada Ltd., P.O. Box 5757, Terminal A, London, Ontario, Canada N6A 4T1.

In the meantime, look for these names and give Thinsulate a try. If you don't, you're in for another cold winter.

Thinsulate[®] Insulation



3M

A Cautious Welcome to the Eighties

The New Decade— Dawn or Dusk?

BROCK EVANS

LAST YEAR, when the dust had settled from the 95th Congress, most environmentalists considered its record perhaps the most outstanding of any Congress in American history. The Clean Air Act had been strengthened, and the Clean Water Act had survived intense assaults inspired by industrial interests. A landmark stripmine-control act was passed and signed by the President, after his predecessor had twice vetoed similar bills. The National Park System was enlarged. Some of the additions to the system had been the subjects of controversy for decades: the Santa Monica Mountains, Redwood National Park and Mineral King Valley in California, and the New Jersey Pine Barrens, to name only a few. And nearly 5 million acres (mostly in national forest lands) were added to the National Wilderness Preservation System, finally settling years of simmering disputes. In December 1978, when President Carter created 50 million acres of national monuments in Alaska, the environmental movement reached a new level of accomplishment.

To predict congressional action in the 1980s, however, the current legislative session must be evaluated as well. And the 96th Congress, though only halfway through its two-year session, is clearly establishing a record of a different order from that of the 95th. An overwhelming Alaska victory was engineered in the House in May, but that has been nearly the only bright spot. The usual pork-barrel dam projects passed once again, and Congress refused to countenance even minimal reform in the development of water projects. The Senate passed damaging amendments to the stripmine act; only strenuous effort can prevent the House from concurring. Both the House and the Senate have passed versions of the infamous Energy Mobilization Board, a tool of the executive branch that may be given unprecedented powers to speed up the construction of "necessary energy facilities"—even in violation of federal law and over the objections of local and state entities.

Most disappointing of all have been the 1979 actions of the Carter Administration. The tone of the Administration has developed an anti-environmental ring—perhaps in anticipation

of the 1980 elections and the allegedly more "conservative" political climate. In April, the President confirmed the Forest Service's RARE II recommendations, which turn over most of the controversial areas to more logging and road-building. Last June, in a further gesture to the timber industry, President Carter ordered more logging in the western national forests. In July, he announced an energy program that features enormous subsidies for synthetic-fuels development and an all-powerful Energy Mobilization Board to ram the new projects through. Finally, in September, the President refused to veto the Water Appropriations bill that included not only the controversial

Tellico Dam in Tennessee—previously opposed by his Administration—but also many projects and provisions that directly contravene his previously declared water policy.

A drastic change of mood has taken place in Washington. "The good days are over," observers say. "The environmental movement has lost its clout and can't get its programs through any

more." Environmentalism does appear to be on the defensive; Congress threatens retaliation against agencies that regulate too much, and the President seems to turn away from values he formerly espoused. The resulting sense of malaise is heightened by the apparent emergence in the West of a "Sagebrush Rebellion," a loose coalition of economic and political interests whose participants are mounting the strongest attack in decades to reverse what they perceive as a trend in federal government toward increased environmental concern and protection.

Are things really so bad? Are the laws we worked for a decade to establish and the places we have worked for years to protect now going to face fresh assaults?

The answer is still probably "no." Though the current course of events, at least when compared with the last two years, seems to move against the things we stand for, the prognosis is optimistic. Three factors support this view.

- *Most of the weakening actions and laws have not yet oc-*



curred or have not yet been passed. There is a crucial difference between speech and deed, between a law that has passed one house and a law that has been signed, between a proposal and an enforceable regulation.

The only thing that counts is the end result. The President has ordered a timber-cut increase, for example, but the trees have not yet been cut, and conservationists throughout the West are stronger than ever in defense of their wilderness proposals. Some clean-air regulations have been weakened, but most are still intact. Congress may eventually approve an Energy Mobilization Board, but experience tells us that regulatory bodies similar to such a board have not always been able to foster environmentally damaging projects.

- *Political power.* The political fortunes of interest groups and institutions do not remain static, they rise and fall and rise again; it is no different for environmentalists than it is for the oil industry, or for labor, business or civil-rights groups. That things are "neither as good as they appear nor as bad as they seem" is a common saying among Washington lobbyists. We simply have to keep plugging along, never quitting, whatever the situation of the moment—that is the key to our ultimate success.

- *Environmental institutions and values are stronger than ever.* If there were a real decline of interest in the environment, the Sierra Club would be losing members and money, struggling to get along. But that is not the case. Finances are never easy for nonprofit organizations, but most environmental organizations are still growing. More important, the volunteers working on issues—those who are the root and the power source of the environmental movement—have increased in number.

And it is not only the organizations that are strong—the values of environmentalism have been institutionalized in countless ways. The federal government, most states, and even some local governments have environmental protection agencies or their equivalent. Public-opinion polls uniformly show strong and unwavering support for more, not less, environmental protection, even in the face of the current economic hard times.

We are not a fad: We are here to stay. There has never been an "environmental golden age"—we have had to fight for every measure of environmental protection. But we have often won, and I see little reason to expect a different result in the future.

In the future, environmental battles will involve comparatively minor, specific legal points; they will not strike at the core of environmental law. There will be more attempts to override the National Environmental Policy Act. Some of these battles will succeed and some will fail; but when they do succeed they will involve case-by-case, specific exemptions for specific economic interests—when those interests feel the politics are advantageous. The law itself will not be weakened or amended in any substantive way.

There certainly will be a wave of fresh attacks on the pollu-

tion laws, particularly the clean air and clean water acts, as these continue to prove onerous to industry. But these, too, will be battles at the edges of the acts, attempts to modify certain provisions and not the entire law. As new information about ecology becomes available, and as the nation's economic situation changes, there may in fact be a need for case-by-case fine-tuning.

The battles of the 1980s will, however, involve some emerging and still-uncertain factors: These include population changes, migration patterns, resource availability, and economic hard times:

- *Population changes.* Much has been written about the "population bulge," the exceptional numbers of people born in the late 1940s and the 1950s who later flooded the schools—and

*It is difficult to predict
whether massive efforts
to increase energy supply
or to conserve will win out.*

then emptied them—and now are flooding the job and housing markets. As the people in this "bulge" go through the various life stages, they will make changing demands on certain resources at various times. Pressure for more housing, for example, increases the demand to cut more timber, some of it inevitably in wilderness areas.

- *Migration patterns.* A north-south migration pattern has emerged—a constant flow of people from the more "liberal" northeastern and midwestern states into the more "conservative" southern and Sunbelt states. Because, for better or for worse, politicians of a conservative cast tend to vote against environmental measures, it will be interesting to see whether the increased number of votes in the southern and Sunbelt states will make it harder to pass environmental-protection laws. Or, conversely, will the influx of northern liberals make the southern vote pro-environmental?

- *Resource availability.* The future costs of developing resources of every kind will certainly be high—far higher than current costs. Shifts in consumption patterns and in national outlook may follow the price hikes, as in the case of energy resources. Thanks to OPEC, oil and gas are very costly, and the mounting costs have spurred a frantic effort to increase oil supplies in the traditional way—by extracting more from the ground, from under the oceans, and from oil shale. This will have serious impacts on the environment and the economy. It is beginning to have an impact, too, on how people use energy and understand the limits of the supply: Clearly, the environmentally safe way to increase oil supplies is to conserve what we already have. The Sierra Club has advocated energy conservation for more than ten years; finally, the nation is listening and, as more people realize the benefits of energy conservation, new laws are being passed to foster it. It is difficult, however, to predict whether massive efforts to increase supply or to con-

serve will win out. The strategy of solving apparent shortages by increasing production is deeply ingrained in our value system, but conserving must be learned. Probably we will pursue both, with more and more attention to conservation, because it is far cheaper.

Many people think that rising prices of minerals and wood will lead to wholesale attacks on wilderness, parks and other natural areas that contain such resources. It could happen, but there is another possible scenario: Wild and beautiful places, as they continue to vanish under the assaults of civilization, become an even scarcer resource in their own right. It is certainly true that we will have fewer wild places and unspoiled spots to enjoy in 20 years than we have right now. But this scarcity will draw more and more attention to the conservation

*Wild and beautiful places
will become an even scarcer
resource in their own right.*

values environmentalists advocate, and prompt more and more love and care for the remaining wild places.

Economic hard-times. Since the beginning of the 1970s, when the costs of the Vietnam war began to catch up with us, we have been living with constantly rising prices, a trend accelerated by the energy upheavals of 1973. Wages have risen also, but not as fast. The result has been a decrease in the economic power of middle-income people and real distress for those on the lower rungs of the economic ladder. What does this mean for environmental values and concerns? A lot depends on how government reacts. If we continue to mismanage our natural resources, to depend upon increasingly expensive fossil fuels and to neglect our renewable resource base of fisheries, forests and agricultural lands, then economic hardships will intensify. The public's perception of national economic insecurity will result in more public pressure to eliminate allegedly costly environmental regulations. This will exacerbate the loss of economic productivity: workers will lose more and more days to environmentally caused illness; food prices will rise as fisheries are depleted and farmlands destroyed; timber and paper will join oil and energy to become major forces in the inflationary spiral as forests are decimated.

On the other hand, if government responds by shifting investments into renewable resources, the inflationary spiral can be brought under control and our natural resource base secured for the use of future generations. People will consume smaller quantities of such nonrenewable resources as fossil fuels and minerals, but will enjoy higher levels of overall economic well-being because of the greater efficiency with which these materials are used and recycled.

Having already ventured into the uncharted sea of the 1980s, it can do no further harm to complete the survey with the following rash predictions:

Alaska. Congress will dispose of the Alaska issue this ses-

sion, with conservationists achieving most of their goals.

Energy. A modified Energy Mobilization Board will be established, but will be extremely wary of upsetting local laws, or of building large, costly projects that are environmentally damaging. Congress will vote some subsidies for synthetic fuels, but increasingly the emphasis will be on conservation.

Nuclear power. Even if the waste-disposal problem moves toward solution, opposition to nuclear power will continue to increase—on safety and economic grounds. The nuclear power program gradually will fall under the weight of its own spiraling costs and the increasing opposition.

New national-forest wilderness. Efforts to establish new wilderness areas will be generally successful—despite strong industry opposition—mainly because of increasing awareness of the scarcity of wild "islands" in a sea of logging roads and clearcut lands.

Air and water pollution. The main body of laws will remain intact despite attacks when certain laws come up for reauthorization. Some legal fine-tuning will take place, and some laws and regulations will be weakened. But by the end of the decade, people will demand stronger protection from pollution, and the laws will be strengthened.

Hazardous wastes. The public will demand and will get stronger laws, both against the abandonment of poisonous chemicals and for the compensation of people injured by exposure to the wastes.

Two final factors must be considered when we look to the 1980s. One is tangible and one intangible.

The tangible factor is that environmental damage cannot be hidden and will not go away. The latest studies show, for example, that approximately 140,000 deaths in the United States each year are associated with air pollution. The knowledge that our air is dirty and our water is polluted can no longer be ignored; each time we learn of such disasters as the Love Canal or PCBs in the Hudson or kepone in the James River, tens of thousands of people understand what environmentalists are talking about.

While it is true that Americans are often characterized as a materialistic people, famous for inventing assembly lines, soft drinks and fast-food stands, there is another deeply felt, integral part of the national character that must also be weighed; it is our love for the land.

Our great park and wilderness systems and our superb network of pollution laws have come about only because the American people want them—no land area in this country would now be protected if some people had not loved and cared enough to fight for it. That is the beauty of the spirit of our nation, and the spirit is as active now as we enter the 1980s as it has ever been. That is why I look forward to the next decade with eagerness and anticipation, and with confidence. □

Brock Evans is director of the Sierra Club's Washington Office.

Energy 1979—What Happened and Why

GENE COAN and CARL POPE

THIS JANUARY, Congress will complete action on proposed legislation dealing with a bewildering and disturbing energy puzzle. Various bills would create an Energy Mobilization Board (EMB); levy a windfall-profits tax on the oil industry; subsidize synthetic-fuels production; and encourage energy conservation and renewable energy resources development. While important details of the final versions of these bills are yet to be determined, the basic dimensions of the legislation are clear, and it is not too early to ask: How did this come about? What do we do now?

Pressure in the nation's capital for *some* sort of legislation to show that "something is being done about the energy crisis" has become overwhelming. As Senator Dale Bumpers (D-Arkansas) said, "Congress wants to do something, even if it's wrong."

With the 1980 election just around the corner, elected officials—from the President on down—fear appearing ineffectual on energy issues. Frustrated by their inability to come to grips with the very real limits of energy supply, members of Congress have panicked. And the situation in Iran has done little to calm the situation.

It has made little difference to Congress that studies show environmental constraints to have played only a minor role in delaying energy-facility construction. And it has hardly mattered that a massive synthetic-fuels program makes little sense for the economy, for the environment, or even for the energy supply. Congress has plunged ahead regardless.

Faced with Congress' panicky momentum, environmentalists have attempted to limit the power of the EMB and to limit the subsidies for synthetic-fuels development rather than to entirely oppose these measures.

Environmentalists are likely to be unhappy with the final result of the energy legislation. Whichever version establishing the Energy Mobilization Board is finally approved, it will have the power to suspend future environmental standards developed to deal with the problems associated with energy-facility construction. The board could even be given the power to suspend existing environmental standards, and it may be given

a substantial degree of freedom from the normal review processes in the courts.

The synthetic-fuels program almost certainly will be larger than the \$3 billion in subsidies that the House passed in June—to the horror of conservationists. The program may be as large as the \$20-billion plan voted by the Senate, and vague promises of even larger sums in future years are likely to be included. The congressional debate on this legislation has made it clear that the synthetic-fuels program, although funded at a major level, will not significantly help reduce oil imports in the near future. Such independent research groups as the Harvard Business School energy team and Resources for the Future have concluded that trying to rush synthetic-fuels production is likely to create an energy industry permanently dependent upon high prices and high subsidies, an industry with serious environmental and social side effects, and possibly an industry that would not even be capable of reliably producing fuel.



Although the EMB will threaten environmental standards, it probably won't do much to speed the siting of energy facilities. If local communities oppose energy facilities, they will fight back. Communities and states will almost certainly challenge the board's powers on constitutional grounds in the courts. Cities or counties may pass environmental standards so stringent that proposed energy facilities would be unable to meet them. If these standards were adopted before power-plant construction actually began, the EMB would be powerless to waive them. Or local governments may utilize taxation policies or other measures not subject to the EMB's powers. Because the President will have the power to review EMB actions, energy-siting decisions will become highly politicized: Will an incumbent campaigning for reelection be likely to force Los Angeles to accept a new oil refinery that local officials oppose?

Congress has voted significant new funding for energy conservation and renewable energy resources, mostly through a system of tax credits and grants. Additional funding for mass transit awaits action next year. But by putting so much money into synfuels, Congress missed the chance to emphasize con-



Discover the shape that outperforms the dome

Mushroom

Outside, the Mushroom-shaped fly sheds wind and weather. But inside, it's square — 7x7 feet of usable space. Near-vertical walls are 3½ feet high so over-6-footers can sit tall. Twin-track



zippered door. No-see-em netting. Shock-corded Easton aluminum frame. Expedition quality throughout. The Eureka! Mushroom: More tent in less pack space than you've ever seen.

Eureka!

Tentmaker for expeditions, back-packers and campers since 1895

Eureka! Tent, Inc.
Box 966-F, Binghamton, NY 13902
Please send 50¢ to catalog

A Johnson outw. associate

L.L.Bean®

Outdoor Sporting Specialties



FREE
Spring
Catalog

Fully illustrated. Features quality apparel and footwear for men and women; fishing, hiking, camping and canoeing gear.

For 68 years L. L. Bean has offered practical and functional merchandise at reasonable prices. Our clothing and footwear is rugged enough to withstand active outdoor use, yet attractively styled and comfortable for casual wear. Many items are of our own manufacture. All are guaranteed to be 100% satisfactory or your money back.

SEND FREE CATALOG

Name _____
Address _____
City _____
State _____ Zip _____

L. L. Bean, Inc.
3891 Main St., Freeport, ME 04033

Early Winters
New 1980
Outdoor
Catalog
FREE



Take this opportunity to send for your free copy of the Early Winters catalog of unique outdoor gear.

The Early Winters Catalog is filled with high-quality, unusual outdoor equipment that'll lighten your load & help make your outdoor trips more enjoyable.

For your big, full-color copy packed with thousands of words of descriptive copy & scores of pictures, send this handy coupon or write today.

Early Winters, Ltd.

110-UN Prefontaine Pl S., Seattle 98104

Please send me your free color catalog of unique outdoor equipment filled with new & exciting items, most of which simply can't be seen or purchased anywhere else.

Name _____
Address _____
City/State/Zip _____

ervation and renewables even though all the data indicate that conservation would reduce oil imports faster, more surely and by larger amounts.

Some interesting and precedent-setting forces came into play in the debate on the EMB. For example, senators and representatives from western states that have energy resources, whose concern has been preserving the rights of states to control their resources and way of life, fought side by side with environmentalists to prevent yet another layer of federal control from being imposed. On the other side, the White House, key congressional energy committees and big oil and coal sought a strong EMB with sweeping powers.

Then, when the synfuels legislation came to the floor of the Senate, the forces chose sides differently. The oil industry was less than enthusiastic about massive subsidies for synthetic fuels because of the federal controls involved, and because federal funding might help ensure windfall-profits taxes on their earnings. Environmentalists and the oil industry were thus on the same side on the crucial votes on synthetic fuels—for different reasons. But with the White House and key Senate leaders working hard for a massive rather than a modest synfuels program, the key vote was not even close—57 votes to 37, rejecting the more modest approach.

The windfall-profits tax appears likely to take a significant bite from the oil-industry profit boost produced by deregulation. The tax will not, however, recapture all that it should. The problem is that if the higher prices following deregulation enrich the oil industry at the expense of the consumer, then using higher prices to reduce demand for oil is not politically realistic. Either a gasoline tax, as suggested by presidential candidate John Anderson, or rationing, as advocated by Jerry Brown, will be needed to produce short-term cutbacks in oil imports.

Our political leadership, then, has failed to meet the challenge of reducing oil imports. They have failed in spite of a number of favorable factors:

- Unlike previous attempts in 1974, Congress and the President were aware of a number of careful analyses, all concluding that as much as 10 million barrels of oil a day could be saved by 1990. The strategy would involve aggressive programs for conservation and renewable energy resources and development of such domestic fossil-fuels as unconventional natural gas. Internal White

Energy 1979—A Chronology

June 26

The House of Representatives approves a \$3-billion bill to subsidize production of synthetic fuels.

July 15

President Carter asks Congress: 1) to appropriate \$88 billion for synthetic-fuel production, to be spent by a new Energy Security Corporation; 2) to establish an Energy Mobilization Board to speed siting of energy projects. Carter opposes giving the EMB authority to override environmental standards; he proposes only \$2 billion for energy conservation and \$10 billion for mass transit.

July 27

House Interior Committee approves a bill creating an Energy Mobilization Board with limited powers to remove procedural delays obstructing energy projects, but with no power to suspend environmental standards. The Senate Energy Committee votes not to give the EMB the power to suspend environmental requirements.

September 6

The House Commerce Committee approves a bill giving the EMB more power than asked for by Carter, authorizing the board to waive virtually all local, state and federal requirements that might obstruct siting an energy facility. The crucial vote comes on an amendment by Representative Tim Wirth to delete these powers. Wirth's amendment is defeated 16-26; the Carter Administration opposes it, despite warnings from Interior Secretary Andrus, CEQ chairman Speth, and EPA Administrator Costle that the Commerce Committee bill is not consistent with the Administration's own position.

September 12

The Senate Banking Committee approves S. 932, a \$3-billion subsidy program for synthetic fuels. Environmental organizations form an Energy Coalition to respond to the President's energy program.

September 14

The Senate Energy Committee again refuses to give the EMB authority to waive all laws but goes along with an Administration request that the board be able to waive *new* requirements, adopted after construction commences on an energy facility (the "grandfather waiver"). The Energy Committee then approves S. 1308.

September 14

Senators Ribicoff and Muskie introduce an alternate EMB

bill, one without a grandfather waiver and without provisions permitting the EMB to take over decision making from other agencies that miss decision deadlines.

October 3-4

The full Senate, by a vote of 58-39, rejects the Muskie-Ribicoff substitute and approves S. 1308, the Energy Committee bill. The Carter Administration declares that S. 1308 gives it virtually everything it wanted from an EMB.

October 22

Representatives Morris Udall, Don Clausen and Tim Wirth introduce a new version of EMB legislation, offered as an alternative to the Dingell Commerce Committee bill, that does not give the EMB the power to take over decision making from other agencies or to suspend environmental requirements. The Administration opposes the Udall-Clausen-Wirth bill, but environmentalists, state and local government, some oil companies and many other groups support it.

November 1

The House, by a vote of 215-192, adopts the Dingell EMB legislation and rejects the Udall-Clausen-Wirth substitute. At the last minute, the Administration supports an amendment by Bob Eckhardt (D-Texas) that removes the power to waive environmental requirements, but the House rejects this latest, last-minute shift.

November 27

The Senate, panicked by dangers to the world's oil markets posed by Iran, rejects the Banking Committee synthetic-fuels bill, with its modest \$3-billion subsidy and approves a \$20-billion bill sponsored by the Senate Energy Committee. The bill also tentatively approves another \$68 billion for synthetic fuels to be reviewed by Congress at a later date. Environmentalists had supported the Banking Committee bill offered by Senator Proxmire, but again were opposed by the Administration.

December 3

Conferees meet to resolve differences between the House and Senate-passed bills creating the Energy Mobilization Board. The crucial difference between the bills is that the House bill permits suspension of existing environmental standards, whereas the Senate bill permits waivers only of future requirements. Environmentalists finally obtain a clear Administration position opposed to waiver of present requirements.

House memos show that on July 15 the President knew of such analyses, and that he knew what was wrong with the synthetic-fuels option. So did Congress, which paid no heed.

• There were strong advocates in each

house of Congress both for a sensible policy on conservation and for creation of an EMB that would prevent unnecessary delays while maintaining environmental standards. Among the key leaders on the Senate side were Edmund Muskie

(D-Maine) and Abraham Ribicoff (D-Connecticut) on the EMB issue, Bob Packwood (D-Oregon), William Proxmire (D-Wisconsin), Bill Bradley (D-New Jersey), and Howard Metzen-

Continued on page 47

YEAR OF THE COAST



The "Year of the Coast," endorsed by the President in his Environmental Message, was conceived and organized by the Coast Alliance, a group of environmental groups including the Sierra Club, the NRDC, FOE and The Conservation Foundation. The campaign intends to focus public attention on the value of coastal resources and to organize public constituencies in support of coastal protection programs at the local, state and federal levels.

Many groups have already organized around specific issues, such as offshore drilling at Georges Bank off New England's coast; the Portsmouth, New Hampshire, oil refinery; marine sanctuaries in the California's Santa Barbara Channel; and development on barrier islands. The Year of the Coast hopes to coordinate these efforts, drawing public attention to the need for preservation of the coasts.

As part of its organizing efforts, the Coast Alliance has developed four major initiatives for 1980:

- A Coast Crisis Center to serve as a clearinghouse for information about coastal issues.
- A campaign to increase by 10% the amount of coastal area under public or private protective management.
- Regional conferences to consider such issues of regional concern as port expansion, commercial fishing, beach erosion, expanded offshore oil and gas development.
- Outreach to and support of local organizations and individuals to help plan and coordinate their own Year of the Coast events.

Already the response to the President's endorsement of the Year of Coast has been considerable. In Boston plans for "Operation Sail" are under way. The chief of public services for the Brooklyn Public Library System is planning activities and special booklists for its 58 branches. North Carolina's three marine resource centers will use Year of the Coast as their public education theme throughout the year. The Great Lakes Sea Grant network and the Great Lakes Basin Commission will hold programs throughout the Great Lakes area. These are only a few of the numerous events already planned.

Protecting the coast involves three central problems. The United States lacks a coherent, positive federal policy for protecting coastal resources, especially the delicate ecosystem of the

shallow-water marine environment. There is, to be sure, a vast array of jurisdictions, laws and programs that affect coasts—but they are fragmented and uncoordinated. The Coastal Zone Management Act of 1972, promoted as a unifying mechanism, has been largely unsuccessful in reconciling conflicting goals and methods into effective management strategies for individual states. Finally, federal insurance programs and disaster-relief funds have disguised and mitigated the economic hazards of developing fragile coastal lands.

The purpose of the program is to draw together all the interest groups involved in coastal issues, which range from urban waterfront development to protection of a particular wetland or barrier island, and have them work together in 1980. This effort will increase public awareness of the effects on the coast of population pressures, planning methods and development.

In addition to the Coast Alliance's ambitious program, each of the alliance's member groups has its own program. The Club's volunteer Coastal Task Force, formed in 1977 under Shirley Taylor's direction, has drawn up a four-pronged effort to utilize most effectively the Year of the Coast. Implementation will depend on the availability of funding. The first of the four parts is a series of regional workshops to build support for strong state and national wetlands-protection programs. Initially, participants will conduct field studies of wetlands in their own areas, investigating the uses made of existing wetlands, who owns them, whether there are permits pending to fill them and whether plans exist for highways, factories, parks or developments. This inventory process is expected to take six months. When it is completed, the participants will gather to compare notes and develop strategies.

In the second segment of the program, the Coastal Task Force is working with the Club's Urban Environment Task Force to seek funding for a one-year pilot program to revitalize urban waterfront areas in three cities. A number of organizations and interests will combine forces to develop general plans for these run-down city waterfronts along with planning processes that could be used elsewhere. The Sierra Club's contributions to these pilot programs will involve technical assistance, help in com-

Opposite: Ecola State Park, on the Oregon coast.

This article was prepared from material published in Amicus and from original material by Jennie Myers, the Sierra Club's wetlands specialist for the Coastal Task Force.

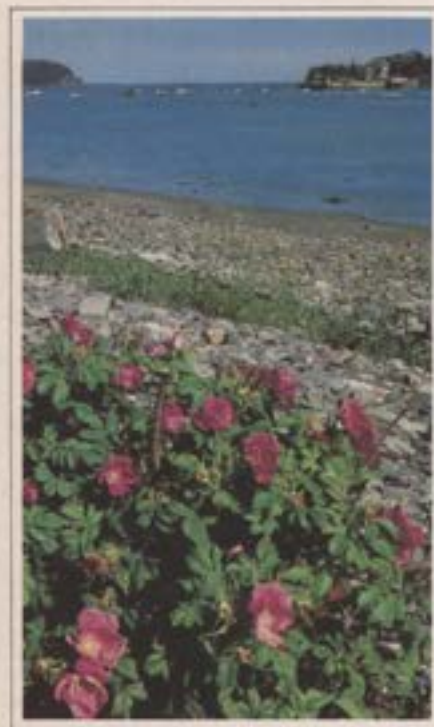
THE DRAMATIC NEWS of major tanker collisions, the Gulf of Mexico oil spill and damage from powerful hurricanes has focused public interest on our fragile coasts. A coalition of environmental groups, fishermen, scientists, labor and other interests have joined forces in a campaign to save the nation's coastline. This campaign will make 1980 the "Year of the Coast."



munity organizing, fund-raising and generally unifying the other groups. The first city where all this will happen is Buffalo, New York.

The third part of the Coastal Task Force's program is putting together a complete list of prime natural coastal areas and landforms needing preservation. We hope that such a list, developed by grass-roots activists, will give strength and cohesion to national and state efforts to acquire especially critical areas.

The effects of energy development on the coasts, particularly the onshore impacts of offshore oil and gas development, have been of long-standing interest to the Club, especially in frontier areas off New England and California. Anticipating the effects of the Interior De-



Jay Heibner

partment's stepped-up leasing schedule and the possible influence of the Energy Mobilization Board, a critical fourth part of the task force's program is being developed: to work for strict implementation and enforcement of the regulations and review mechanisms established by the Outer Continental Shelf Amendments of 1978.

The Sierra Club will play an important and varied role in the Year of the Coast, in the Coast Alliance, and in the decade of hard work likely to follow our current efforts, to assure that our coastal resources are held in trust for all Americans. □

Paul Evans

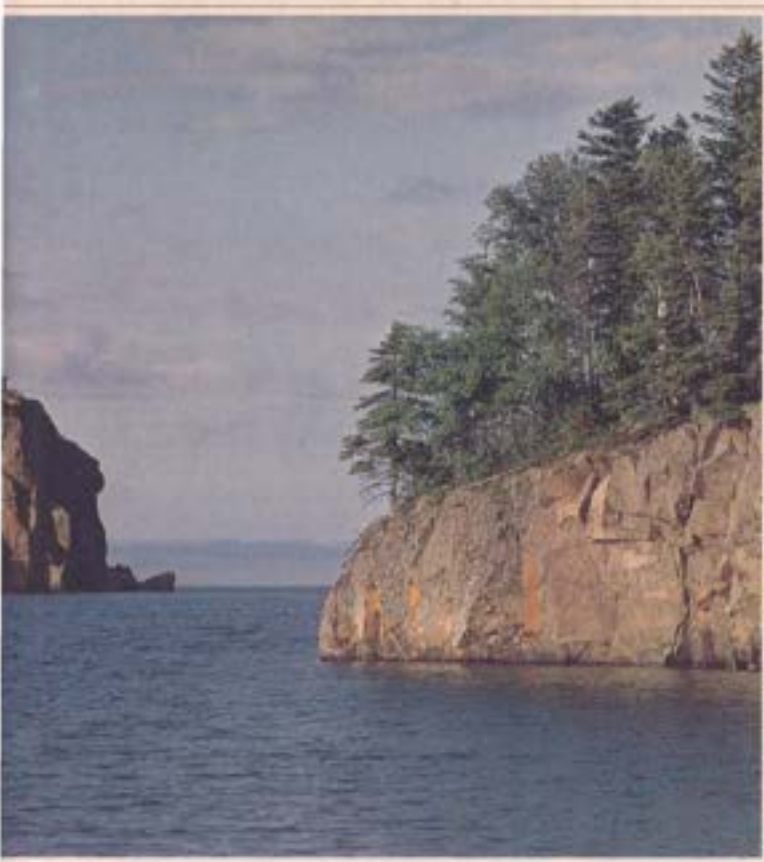


Ed Cooper

Arthur Demper



The infinite variety of the nation's coasts makes their preservation politically challenging. The regulations that might preserve a wild shoreline from development or overuse would be inappropriate for a popular beach near a big city. Left: the rugged coast of Maine. Top: the misty shores of Coos Bay, Oregon. Center: the charming Northern-California Victorian village of Mendocino. Bottom: one of the most popular beaches in the United States, Ocean Bay Park, in New York's Fire Island National Seashore.



Ed Cooper

Contacts and Resources for the Year of the Coast

Regional reauthorization hearings on the Coastal Zone Management Act will be held in February. Your attendance and comments there will be crucial. Watch the *National News Report* for information, and contact the Coast Alliance for schedules:

Year of the Coast
Coast Alliance, Stn. S
P.O. Box 2708
Washington, D.C. 20013

For more information or to work on coastal issues, write:

Shirley Taylor
Sierra Club Coastal Task Force
1414 Hilltop Dr.
Tallahassee, FL 32303

Year of the Coast
Sierra Club
530 Bush St.
San Francisco, CA 94108

CUSP, the Citizens' Update on Shoreline Policy, is the Sierra Club Coastal Task Force's newsletter about coastal issues and problems. It is edited by Shirley Taylor, who chairs the task force, and distributed free to anyone interested. Articles deal with issues in lay terms and provide information on upcoming events, opportunities for comment, and sources for detailed material on a variety of topics. Write to:

CUSP
P.O. Box 2692
Tallahassee, FL 32303



Donald M. Bradburn



Jerry C. Caprio

The popular notions of coasts involve craggy ocean cliffs with dramatic surf—or gentle, sandy beaches. But lakes and coastal wetlands are also of great ecological importance. **Top:** Minnesota Split Rock Lighthouse, on the north shore of Lake Superior. **Bottom:** sunset on Horn Island, Mississippi. **Right:** Florida's Everglades.

Sierra's Editor Talks With the Executive
Director of the Sierra Club Legal Defense Fund.

A Talk With Rick Sutherland

FRANCES GENDLIN

Frances Gendlin: *Rick, just what is the Sierra Club Legal Defense Fund?*

Fredric Sutherland: The Sierra Club Legal Defense Fund is a nonprofit corporation, a public-interest law firm, and we operate under guidelines prescribed by the Internal Revenue Service. Our lawyers practice environmental law. We represent the Sierra Club, other conservation organizations and concerned individuals in environmental cases.

Fran: *When you say "concerned individuals," do you mean that people can just come in off the street with an environmental problem and ask you to represent them?*

Rick: In theory, yes. In practice, of course, because we're located on the third floor of an office building in San Francisco, we don't get many people just walking in.

Fran: *Has it ever happened?*

Rick: Oh yes, but more often they're from groups concerned about various environmental problems all around the nation.

Fran: *They are all concerned with upholding environmental laws and regulations?*

Rick: Yes, we represent only clients who are concerned about the environment. We bring lawsuits, of course, and our attorneys participate in many administrative proceedings on the federal, state and local levels. We also do innumerable less-formal tasks, such as writing letters, making inquiries, conducting investigations for our clients in environmental matters. In short, we do everything that other lawyers do for their clients.

Fran: *So the Sierra Club is your client. Then you're not a part of the Club?*

Rick: No, we're a separate organization, governed by an independent board of trustees. We are considered a charitable organization by the Internal Revenue Service, and thus contributions are deductible by the donor.

Fran: *What does your board do?*

Rick: Like all corporate boards, it sets policy and determines how big an operation we'll have, how much money we'll spend, what areas we'll specialize in. We have an eighteen-member board, most of whom are practicing lawyers. Fortunately, they're very active on our behalf.

Fran: *Are there any Sierra Club leaders on your board?*

Rick: Only one, Phil Berry, who's also on the Club's board. None of the others are connected with the Club in any formal way.

Fran: *How long has the Sierra Club Legal Defense Fund been in existence?*

Rick: It was formed in 1971, an outgrowth of the old Sierra Club legal program that took shape in the 1960s. Although I wasn't around at the time, my understanding is that Phil Berry had a lot to do with its formation during his term as president of the Club. Don Harris and Fred Fisher were doing most of the Club's litigation at that time, and they're now the president and vice-president of the Legal Defense Fund.

Fran: *You've said that sometimes a person might come in off the street and propose a case to you. What about Sierra Club activists from different parts of the country? Do they ever come to you directly, and do you work with the volunteers?*

Rick: Yes, most of the cases we bring on behalf of the Club are initiated by the

volunteers, through the chapters, groups or regional conservation committees. Very few are initiated on the national level. Once we begin litigation, we work with the volunteers, who gather facts, try to locate expert witnesses, and of course do fund-raising to help pay the expenses of litigation.

Fran: *The Sierra Club has a legal coordinator, Earl Blauner. He works for the Club, but in your office. What does he do?*

Rick: Earl handles most of the initial inquiries from Club volunteers, whether phone calls, letters, or a resolution from a group. Sometimes he decides that a particular case should not be pursued. He may decide, for example, that it would be far too expensive, or that the likelihood of success is so minimal that it wouldn't be worth pursuing. Most of the time we decide together about the cases; we have to figure out what we're likely to accomplish if we win a lawsuit. We also have to assess the local political situation to see if we can avert the environmental harm that is threatened, how much the case might cost, and, in states where we don't have an office, who will handle the case, if we take it.

Fran: *Sounds like you've got a lot of work to do. How big a staff do you have?*

Rick: We have ten lawyers and several law clerks working in four offices. Four lawyers are here in San Francisco, two in Denver and three in Washington, D.C. For the last year and a half we've also had a lawyer in Juneau, Alaska.

Fran: *Why in Alaska?*

Rick: Alaska is where the environmental action is, where it is likely to be for a number of years. Alaska certainly is high on the Club's list of priorities, and there

are great battles to be waged and victories to be won there. I think the Legal Defense Fund can rightfully claim that many of the victories won in Alaska are due to our efforts.

Fran: *What kind of people go into public-interest law? Are you all young? Is this a training ground or is this a career for life?*

Rick: When I first started public-interest law in 1970, I assumed it would be for a short period of time, but it has turned out to be my career. This is not atypical. Three of our lawyers have been with us for more than five years, and they give every indication of staying for a long time. In fact, Tony Ruckel has become an institution in Colorado. The same is also true of public-interest lawyers all over the nation. We get hundreds of applications every year, yet we are simply unable to offer everyone positions, since we are not going to expand in the foreseeable future and there doesn't seem to be much staff turnover.

Fran: *Does your staff come from other legal firms within the environmental community?*

Rick: No, that's not our experience. Most of our lawyers come from private law firms, although some have worked in government or in neighborhood legal services. It's very difficult to generalize.

Fran: *You say you're not planning to expand, and that makes me wonder about your financial situation. How are you funded?*

Rick: From a number of sources. The Sierra Club does not pay us any money directly, though the Club does make an annual commitment to use its best efforts to raise money for the Legal Defense Fund. In 1980, the Club has committed itself to raise \$340,000 of our \$800,000 budget. We raise the balance of our funds through contributions by individuals and foundation grants, as well as from attorneys' fees awarded in cases we've won. The Legal Defense Fund receives no money from the government. Historically we have been fortunate in obtaining a large amount of our funds from the Ford Foundation. In fact, it's fair to say that there probably would be no Legal Defense Fund without the generosity of the Ford Foundation. Unfortunately, in the future we will have to operate without this source of funds; Ford no longer gives general support grants to organizations such as the Legal Defense Fund.

Fran: *How will that affect you?*

Rick: It will be imperative that we oper-

ate much more efficiently, that we probably not expand in the near future, and that we approach other foundations or individuals.

Fran: *I thought that there has traditionally been great acceptance by foundations of the importance of public-interest law. Does this pullback mean they are no longer thinking this is a worthwhile endeavor? Why are they ending their support?*

Rick: There never was great acceptance of public-interest law by most foundations. I would say that only 10% of all foundations have supported public-interest law firms such as the Legal Defense Fund. While a number of the remaining 90% have been prohibited from such support by their charters or by legitimate interests in other areas, many



foundations don't give money to public-interest law firms because of their ideologies or because of timidity on the part of their officers and boards. We have been too successful. We have won many victories, we are highly visible—and we are quite controversial.

Fran: *You told me the Club can contribute only \$340,000 of your \$800,000 budget and that the Ford Foundation is withdrawing its support. Where are you going to get another half-million dollars?*

Rick: That's one of my primary jobs—raising funds to keep the Legal Defense Fund operating. Fortunately, we have a number of generous supporters and a very helpful board of trustees.

Fran: *Tell me about some of the victories of the Sierra Club Legal Defense Fund.*

Rick: We have won a number of very important victories, many of them in Alaska. For example, we prevented construction of the Copper River Highway as originally proposed, and we got the decision that prevented the proposed North Slope gas pipeline from being routed through the Arctic Wildlife Refuge. But perhaps our greatest success to date has been the Admiralty Island litigation in southeastern Alaska. Ten years ago, we sued to stop a 50-year timber-sale contract between the Forest Service and Champion International Corporation. The legal proceedings brought to light enough damning evidence of the environmental degradation that would be wrought on Admiralty as a result of the proposed massive clearcuts that Champion asked to withdraw from the contract and the Forest Service cancelled it.

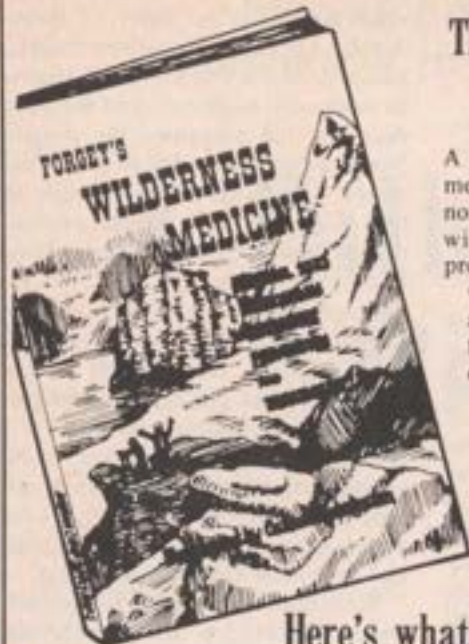
Subsequently, we had to sue two urban Indian corporations, in Sitka and Juneau, that had proposed to clearcut lands on Admiralty Island. We are still in the midst of that litigation, but it appears we may be successful in getting them to select alternative lands, off Admiralty Island.

As you know, Admiralty Island is now a national monument, but it is clear that without years of Legal Defense Fund litigation there wouldn't have been a monument—much of the island would have been clearcut.

Of course, we've had other victories—on the Colorado Plateau, for instance, where we helped keep the Kaiparowits power plant from being built in an area surrounded by national parks. And we were actively involved in litigation that helped protect Mineral King Valley and Redwood National Park until Congress had time to act. Mineral King Valley is now a part of Sequoia National Park, and Redwood National Park has been dramatically increased. Many of the problems that existed before the expansion bill have now been obviated.

Fran: *That's wonderful, but you must have lost some cases, too.*

Rick: Of course we've lost some. Recently we lost a fight in the trial court to sustain the California nuclear energy laws, for example. But with very few exceptions, even in the cases we've lost, we've gained something. Sometimes projects have been scaled down, for instance, and less timber cut than originally proposed, or cut in less environmentally sensitive areas. Sometimes the victory is only conveying the message that we're keeping an eye on how our opponents are doing things.



THE Guide to Medical Survival Outdoors

A book devoted to the selection of medications, both prescription and nonprescription, and their use under wilderness conditions. Medical problems are presented by symptom with optimal treatments simply and concisely described. Special features include an Instant Reference Clinical Index; removable summarized instruction sheet for medical kit use; complete immunization schedules; emergency medical and surgical techniques

Illustrated; 135 pages;
Popular paperback format.
\$5.95 + 75¢ handling

Here's what the professionals say:

"This volume ought to be diligently read! It could be the required data for assuring a successful wilderness journey. Don't leave home without it!"

CALVIN RUTSTRUM

Outdoorsman - author of
10 Books on wilderness technique

"Dr. William Forgey is an unusual man, an experienced wilderness traveler in the far north and a physician of considerable reknown. His book WILDERNESS MEDICINE is fascinating and has wide appeal."

SIGURD F. OLSON

Naturalist - author of
8 books on wilderness interpretation

"Every serious backpacker should read Forgey's WILDERNESS MEDICINE - lightweight kits and simple instructions make this book a must! It should be in every pack sack summer or winter."

BOB RETHMEL

Hiking and backpacking expert
Author - *Backpacking 6th Edition*

"A valuable contribution of professional medical knowledge and wilderness expertise. It is THE guide to medical survival outdoors."

PAUL PETZOLDT

Wilderness Use
Education Association
Author - *The Wilderness Handbook*

"I strongly recommend this book to every canoe expedition - from weekend trips to epic voyages. It provides basic and advanced medical technique for wilderness travel."

NICK NICKELS

Canoe expedition authority
Author - *Canoe Canada*

FREE - GIANT 64-PAGE CATALOG OF MEDICAL AND CAMPING SUPPLIES AVAILABLE FROM THE PUBLISHER. BOOK PURCHASE NOT REQUIRED. JUST MARK THE BOX ON THE COUPON.

MONEY BACK GUARANTEE

Send \$5.95 + 75¢ handling to:
INDIANA CAMP SUPPLY
Box 344-S, Pittsboro IN 46167

Send FREE 64-page Catalog

Name _____

Address _____

City _____

Fran: You say you "sue" for some objectives. Who is it that you sue?

Rick: There's a popular misconception about who we sue. In popular mythology, environmentalists do battle with industry. In fact, almost all of our litigation is against government, usually the federal government. We do have good environmental laws, but too frequently the federal agencies that have the responsibility of carrying out those laws are derelict in their duties. Then it's necessary to bring litigation to force them to do what the law requires.

Fran: How does the federal government generally view public-interest law firms?

Rick: Who do you mean? The U.S. Army Corps of Engineers? The Justice Department? The Environmental Protection Agency? I am sure some agencies view us differently than others. Moreover, it depends on the powers that be. If it's the Nixon Administration, it's different from the Carter Administration.

Fran: Do other environmental organizations have their own law firms, or do they depend on us?

Rick: The Natural Resources Defense Council and the Environmental Defense Fund are both lawyer and client. They not only affect environmental policy, they sue to implement it. The National Wildlife Federation has its own lawyers. But The Wilderness Society and the National Audubon Society do not. We bring cases on their behalf occasionally, as well as for Friends of the Earth and others.

Fran: What are you working on now?

Rick: Well, we're devoting our resources to legal efforts in Alaska. As I mentioned, we're continuing the Admiralty Island litigation. We're involved in litigation concerning the Misty Fjords National Monument in southeastern Alaska. The U.S. Borax company has a proposal to develop a huge molybdenum mine right in the heart of the national monument.

In the East, we're involved in two cases, trying to prevent the inundation of beautiful wild areas in West Virginia and Virginia by badly conceived pumped-storage electrical generating plants. We're also proceeding with litigation to force the federal government to adopt full scrubbing devices as the best-available control technology for coal-fired power plants. And we're pursuing a series of cases in our Denver office against the Park Service to prevent expansion of the Jackson Hole airport, and to improve the



management of river-running in Grand Canyon National Park.

Fran: *But the Colorado River Management Plan already has been issued. What are you doing?*

Rick: Our lawsuit was initiated in part to encourage the Park Service to bring that plan out quickly, and to have it be as tough as possible. We've had some success in both respects.

We also have two proceedings in the West concerning water rights. We are attempting to make the federal government assert its water rights in the Escalante area of southern Utah, where a proposal is pending—the latest in a long line of proposals—to build a big power plant using water from the Escalante River. Second, the city of Los Angeles has been diverting water that flows into Mono Lake, and the level of the lake has been declining drastically, to the detriment of the wildlife there. We believe the federal government should fulfill its duties to protect the lake and its wildlife.

Fran: *What is the role of environmental litigation in general? How does it work?*

Rick: It serves many functions. It is frequently used as a last resort to stop the bulldozers or the chainsaws. Then what we want is an injunction, a court order directed toward those who are about to despoil the landscape, to make them refrain from doing so. Thus, in one respect it's used as a device directly to protect resources.

In other cases, we bring lawsuits to improve regulations. Congress frequently passes laws requiring interpretive regulations by governmental agencies, like the EPA. We will sue if the

proposed regulations don't carry out the intent or the letter of the law. Once regulations are adopted, they have the force of law, yet all too often, the regulatory agency exercises unwarranted discretion and gives away too much. This often happens under the Clean Air Act, the Clean Water Act, the Toxic Substances Control Act and under other pollution-control laws.

Lawsuits also serve a publicity function, and although we would never bring a lawsuit solely for that purpose, the publicity a lawsuit generates sometimes focuses public opinion on a specific environmental issue.

Fran: *So environmental litigation is essential?*

Rick: Oh yes, and I think it will continue to be. Right now environmentalists are suffering legislative defeats in Congress. Recently, the President signed the law that permits the Tellico Dam to go forward. And Carter seems to be under great pressure to develop energy resources and to cut through what is perceived to be a lot of red tape in the form of environmental laws. We are losing a lot of legislative battles, so maybe we're going to have to resort more to the courtroom in the future.

Fran: *There's a growing move toward mediation these days. Will that lessen the need for litigation?*

Rick: Some environmental disputes simply aren't amenable to mediation. For example, people opposed to nuclear power are not likely to be satisfied by an offer to move a reactor to a different location, when their concern is with nuclear energy itself, not with the siting of a particular plant. So, while mediation may work for some disputes, it is probably not a total solution.

Fran: *Is there a lot of environmental litigation? Are we clogging up the courts?*

Rick: That's another misconception. I've heard that accusation frequently, but it simply isn't true. Statistics from the Council on Environmental Quality indicate that fewer than 10% of all "major federal actions"—actions requiring the preparation of environmental impact statements—have been involved in litigation. And the percentage of lawsuits against lesser projects is even smaller. It is clear that the overwhelming majority of federal projects have gone unchallenged in court.

Fran: *How do you decide which cases to litigate? People contact you and the Sierra Club for help. In addition, the*

Canoe Dig It?



University of California
Davis

WILDERNESS SPORTS SHORT PROGRAMS

For folks who want ecologically-sound exercise and fun while they learn skills, safety and equipment options in:

River Canoeing Introduction
with state and federal wilderness training expert Jim White: April 12-13, 19-20, or May 31-June 1

Wilderness Canoeing
with Jim White: May 3-4, 10-11, or June 7-8

Kayaking Introduction
with Mark "Mothra" Lorenzen, certified boatman and kayaker: April 12-13, 26-27, May 10-11, or May 17-18

Advanced Beginning Kayaking
with "Mothra" Lorenzen: May 3-4

Whitewater Rafting Introduction
on the American River with Jim Katz, founder and director of James Henry River Journeys: May 3-4, or 10-11

Rockclimbing for all Outdoorspeople
with mountaineer Ken Harper: June 7-8, or 14-15

Ropes
with Ken Harper: April 12 or 19

For our free catalog, Wilderness Venture, write University Extension, Box 55, University of California, Davis, CA 95616. Telephone Alice Fisher (916) 752-0880.

SPRING AND SUMMER, 1980

south american wilderness adventures



TREKKING EXPEDITIONS TO THE ANDES, 1980

(Feb) **The Patagonia Expedition**
Granite spires of the Southern Andes

(Jun) **The Vilcabamba-Vilcanota Expedition** 11 days hiking along Inca trails through 2 different mountain ranges

(Jun) **Run the Inca Trail to Machu Picchu** *A special trip for runners

(Jul) **Hiking Inca Trails in the Cordillera Vilcabamba**

(Aug) **Trekking Peru's Cordillera Blanca** Spectacular range — 27 peaks over 20,000'

(Aug) **Trekking the Andes of Bolivia** Hike on Inca trails from the highlands to the jungles

• Expert leaders • Small groups

Write for free 14-page illustrated catalog:
South American Wilderness Adventures, Inc.
1760-SD Solano Ave., Berkeley, CA 94707
(415) 524-5111

Alpine Adventure
Adventure is Our Business

Alpine Adventure has developed the Cocoon, a bivouac-sack/sleeping bag cover that incorporates recent developments in shelter design and outerwear fabrics. Gore-Tex™ Laminated is used as the top layer of each Cocoon and waterproof nylon as the floor.

Two-way YKK zippers and velcro tabs provide for adjustable ventilation. The Cocoon weighs less than 2 lbs. and there is plenty of room inside for one person, his sleeping bag, and extra gear.

The Super Cocoon has added features including zippered mosquito netting, a hood support pole, and a roomier head area. Anyone who has shivered the night through in a high alpine bivouac or rain storm, or suffered in a poorly designed sleeping bag or tent will appreciate the simplicity and efficiency of the Cocoon.

Check appropriate box: Cocoon — \$79
 Super Cocoon — \$89
 Please send further information on these products

Send my Cocoon to:
Name _____
Address _____
City _____ State _____ Zip _____

801-263-1212

Club has its own cases for you to follow. How do you decide?

Rick: That's not easy to answer. We have to evaluate a number of factors. We have to consider the likelihood of success. We have to consider the environmental damage that will occur if we are unsuccessful. We have to evaluate fairly mundane considerations, such as do we have the time to pursue the case? We have to consider the expense of the litigation. And we have to consider whether, if we are successful in the lawsuit, a successful political solution can be found. Usually environmental litigation is not the entire answer in itself. It only serves to provide time, to focus attention, and to buttress lax laws until political solutions can be effected. So we juggle all these factors and make decisions on an *ad hoc* basis. Sometimes we make them well, and sometimes we don't.

Sometimes we have comparatively few lawsuits to consider at a given moment; then it's easy to make the decisions. At other times we have literally 20 potential lawsuits we've been requested to bring, and it isn't easy to decide among them. We do our best.

Fran: *Is there ever a time when the Sierra Club wants you to bring a case, and after investigating you find you don't agree with the Club's position?*

Rick: Yes, but not usually on environmental grounds. For example, we may determine that our chances of success are so small that it doesn't justify spending our limited resources, or that we may not have the time to carry it through.

Fran: *How is it working with volunteer organizations? Is it hard? Easy? How do you find working with the Club?*

Rick: The Sierra Club is one of the most difficult clients to deal with! The Club speaks with so many voices. It truly is a democratic organization with active volunteers on the grassroots level who really care. It is different from many other environmental organizations that are governed and run by professional staffs out of national offices.

The Sierra Club has volunteers who really care about issues all over the country. So it is difficult to deal with not only because of the number of cases demanding attention, but also because of the many levels of decision-making, from the individual volunteer to the group, to the chapter, to the regional conservation committee, to the national board of directors. As if that weren't enough, we also have to deal with the staff. So it is often hard for our attorneys to know who speaks in any given case for the Sierra

Club, who speaks for the client. The real answer is that many people speak for the client.

Fran: *How can the Club help with this? How can we make your work easier and more effective?*

Rick: It would help if the volunteers and the staff abided by the policy for initiating lawsuits that was adopted by the Club's board of directors. This policy includes the procedures for authorizing lawsuits and filling out the appropriate forms. Some chapters have legal committees, and when we get a request for litigation, virtually all the work is done. Other chapters are less sophisticated and less organized, or they've had a change in leadership and the new leaders are unaware of the procedures. As a result, we spend a great deal of time doing the elementary research: who do you want to sue, what is your objective, and do you think you can accomplish a political result?

Fran: *I didn't know there were established procedures for initiating lawsuits with the Legal Defense Fund. Do Club activists know that?*

Rick: They should. There is a memorandum on it and it's been distributed to all the Club leaders.

Fran: *Could they write to Earl Blauner and get copies of it?*

Rick: Right.

Fran: *You know, sometimes I think about groups like the Sierra Club—or any cause-oriented group. If we're successful in permanently protecting the environment to the highest degree, then ultimately there will be a lesser need for the Club itself. We might even put ourselves out of business.*

Rick: Indeed.

Fran: *Do you see that as a possibility for the Legal Defense Fund?*

Rick: I see now as great a need for environmental litigation, if not greater, than ever before, because environmental protection is a goal that waxes and wanes in public opinion. During the early 1970s, of course, it was a high priority. More recently, with our ostensible energy shortage, it appears to be a lower priority. And the courts serve an important function in protecting environmentally sensitive and valuable areas and resources from degradation. Environmental litigation can't be the whole answer, but it is an important part of the environmental movement's long-term efforts to improve our quality of life, and to keep the planet healthy. □

An Adventure on Mt. McKinley

Skiing a Distant Circle

Text and Photographs by
GALEN ROWELL



Spartan accommodations on a river of ice.

MY FRIEND Ned Gillette made me an offer I couldn't refuse. He asked me to join, all expenses-paid, a four-man expedition to go to Alaska to make the first circle of Mount McKinley on skis. I had considered precisely the same "orbit" for several years, but when I calculated some of the minimum requirements and realized that they included 17 days of travel and carrying an 80-pound pack, I had put the idea on the back burner. Yet I instantly accepted Ned's offer, knowing full well there were two even more serious problems.

The first obstacle was the route itself. An obvious classic, it ran 90 miles on ice entirely above timberline, within the shadow of the mountain. The reason the route had never been completed was equally obvious. Five great glaciers—each longer than any in the Nepal Himalayas—descend the flanks of the 20,320-foot mountain and, turning at its base, form a circle of ice; intersecting that circle, however, are the three awesome buttresses of McKinley, each reaching at least 10,000 feet. The project would require not only rugged skiing on highly crevassed glaciers, but also mountaineering on the

buttresses that would be more difficult than a normal climb to the summit.

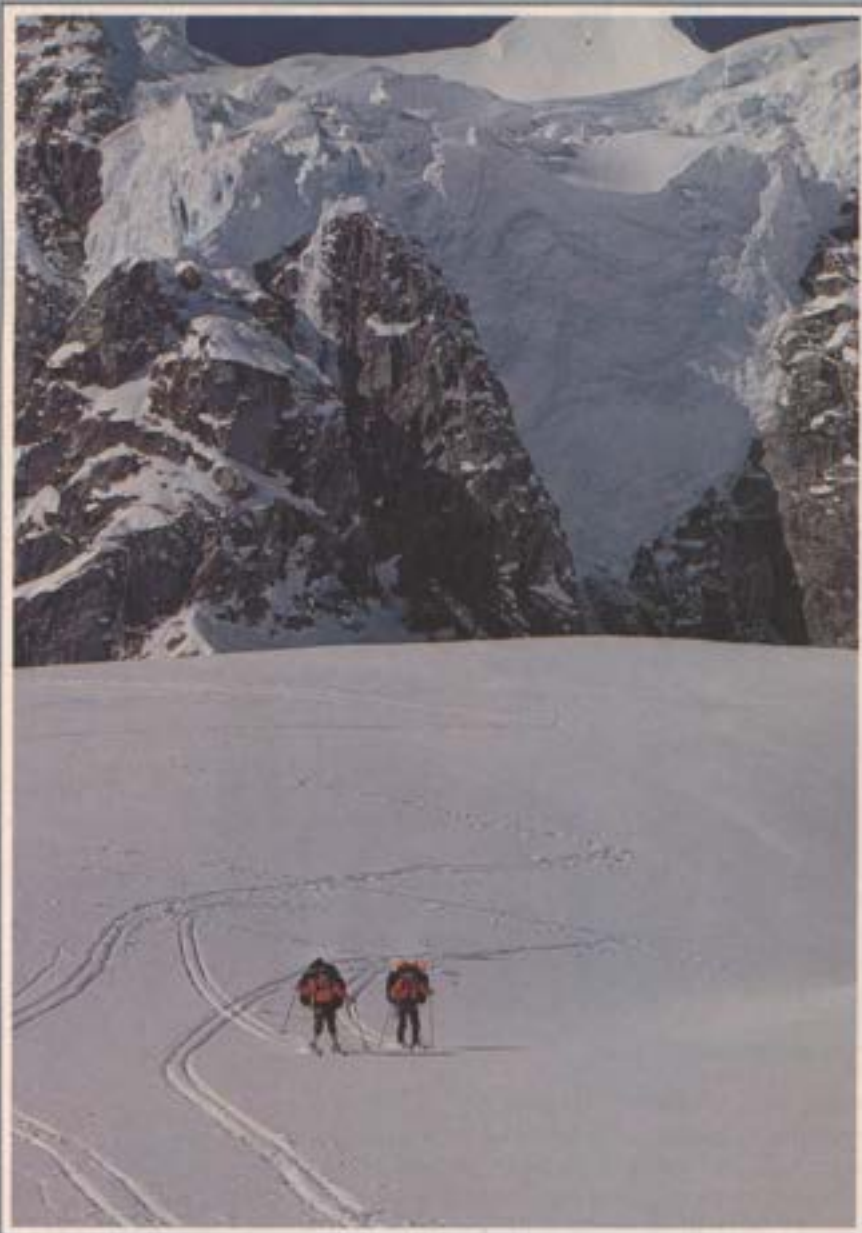
The second hitch was equipment. Ned's funding was from companies that wished to use our success, if it happened, to advertise the durability of their cross-country skis, boots, bindings and poles. We would use ultralight touring skis with 50-millimeter racing bindings designed for fast cruising on prepared tracks, not for grueling glacier travel with heavy packs.

Ned, an Olympic cross-country skier in 1968, had already used "skinny skis" for the first winter crossing of the Brooks Range in northern Alaska and for crossing Canada's Ellesmere Island, 500 miles from the North Pole. Two of his Ellesmere companions, Alan Bard and Doug Wiens, would round out the McKinley team. Ned agreed with me that downhill skis would offer more stability, more enjoyment and less risk of breakage than would thin skis, but he brought up some strong points in defense of the Nordic equipment. On our April journey we would be constantly exposed to subzero temperatures. Our feet would actually be warmer in the tiny cross-country shoes with light overboots, which would allow the feet to flex, than in the far heavier but rigid mountaineering boots I preferred. Also, using lighter skis and boots would not only make our legs less tired at the end of each day, it would reduce the loads we would have to carry over the three steep buttresses of the mountain.

Two thirds of our route lay inside McKinley National Park, where it is illegal to land a plane or make an air drop. We arranged for a dog team to bring one food cache to the edge of the Muldrow Glacier in the park, and for a pilot to fly a second cache to the only building in 40 miles, the Mountain House on a rock promontory along the route, outside the park's boundary. Our starting point was the usual staging area for McKinley climbs, at 7000 feet on the Kahiltna Glacier where pilots can land ski planes.

The trip began uneventfully. We skied slowly up the Kahiltna Glacier into a storm, waited it out and, on the fourth day, crossed the steep ice of Kahiltna Pass to the Peters Glacier. There, on the north side of the crest of the Alaska Range, conditions changed radically. We traveled over an ice-ocean with great frozen waves and swells that made navigation difficult, and high winds whipped up a ground blizzard, adding to the general confusion as we tried to reach a campsite late in the day. Then





Opposite: Heavy packs, Nordic ski equipment and severe conditions took their toll. Bottom left: Ned Gillette displays his aptitude for discovering hidden crevasses. Bottom right: Rappelling with skis was often necessary on the steep cliffs of the buttresses. Above: Ski mountaineering in a high and wild landscape, across a virgin glacier. Right: Don Sheldon's snug Mountain House, a tiny pocket of civilization on Ruth Glacier, set in a vast wilderness.



Alan Bard took a forward fall and was driven into the ice by the weight of his huge pack. His shoulder was dislocated, but he managed to pull it back into the socket and then walk to our hastily chosen tent site.

To get Alan to a hospital, two of us would have had to ski to civilization—at least a week's journey—and request special permission for an air evacuation. So we were relieved the next morning when he was able to continue, though on foot rather than on skis. By luck we had come to a windblown area where walking was possible. Later that day, Alan decided to try skiing slowly on what appeared to be an easy fifteen-mile downslope. He was afraid that he might get going too fast and reinjure his shoulder, but the fear proved unfounded; the snow was underlain by depth hoar, a pebbly product of recrystallization in extreme cold and low precipitation—even with our skis on we sank to our thighs. The fifteen easy miles took three days; two miles through the worst part took ten hours. This slow interlude allowed Alan's shoulder to heal rapidly.

The soft snow often broke through to hidden crevasses, and we began to notice a pattern to these encounters. Normally, either the leader or the heaviest member of the party is most likely to break through. Our lightest man, Doug, had the greatest fear of crevasses, yet whatever his position along the rope connecting us to one another, he had an uncanny knack for locating the dangerous holes. When his feet reached into black space, he would give a loud shout; two of us would hold him with the rope from going in, while the third would ski up and take a photograph of him.

As we crossed the second and third glaciers, the total sterility of this land crept upon us, crowding out mental images of other life forms. Snow and ice stretched infinitely in all directions; not a track was to be seen. Then, after camping at the lowest point on our orbit below Gunsight Pass, we awoke to the chirping of two rosy finches outside the tent. Never have I felt such kinship with a songbird.

We reached our first cache on the seventh day, replenished our packs, then crossed from the Muldrow Glacier to the Traleika, our fourth glacier. For the next two days we skied gradually upward toward an imposing cul-de-sac. No one had ever crossed from the Traleika to the Ruth Glacier over the intervening east buttress

Paradise Lost?



We don't think so. But the growing number of hikers, backpackers and campers is placing undue stresses on many of our more popular woodlands and trails. It's a problem that concerns everyone who uses and enjoys the great outdoors.

That's why we've recently published a booklet

entitled, "Stepping into Wilderness". It's packed with information and practical suggestions on how to "soften" our passage through the wilderness. If you'd like a copy, complete the coupon below and return it with \$1.



QUABAUG
RUBBER COMPANY

Exclusive U.S. licensee for VIBRAM® soles and heels.

QUABAUG RUBBER CO.

P.O. Box 276M, North Brookfield, Mass. 01535

Please send a copy of "Stepping into Wilderness". Enclosed is \$1.

NAME _____

ADDRESS _____

CITY _____

STATE _____ ZIP _____

**Get involved in preserving our wilderness.
Every thoughtful step you take helps!**

of Mount McKinley, although two parties had reached the ridgetop before retreating. The wall of snow and ice rises as far above the glacier as El Capitan rises above Yosemite valley. Our plan was to attempt the crossing in one day, and we did succeed in cresting the ridge by early afternoon. Looking down the other side struck fear into our hearts. A thousand-foot wall of unbroken ice dropped away at an average angle of 70 degrees. We could see no way of traversing to gentler slopes on either side. That night we camped at 11,000 feet on the corniced ridge, more exposed to the elements than we had ever feared, but were compensated by a panorama of unparalleled beauty. Peaks rose more abruptly in far more remote surroundings than anything I have seen in the Himalayas. As far as the horizon, there was no hint of life. We had been removed from the outside world for many days; but only now, when we could see so far into the distance, did we really feel alone. There was just the white of the snow, the blue of the sky and the fleshy hue of exposed rock.

The next morning we began the descent. Rappelling down the steep wall required seven anchor points 150 feet apart, but we had only two ice screws for anchors. So instead of securing the ropes with ice screws we used a method most climbers see only in textbooks: carving bollards, or horns, in the ice or snow. Where snow covered the ice thickly, we made a bollard about six feet in diameter and slipped the rope into the groove around the back. In hard ice, we had to chop with an axe for half an hour to carve a safe bollard only a few inches wide. The descent took eight full hours, and it ended with Doug, the last to arrive, falling into yet another crevasse. We all rejoiced at leaving the vertical realm and exchanging our heavy mountaineering boots for ski boots and skis. A mile-long run through gently inclined powder brought us to a level camp on an arm of the Ruth Glacier.

The next day we entered still a different world. A snow-covered icefall led to the great amphitheater of the Ruth Glacier, recently named the Don Sheldon Amphitheater after the late bush pilot who had built the tiny Mountain House there. The geography was the grandest in the entire McKinley region, with wider expanses of ice, higher granite cliffs, and more distinctive peaks than we had yet seen. But this region is not even part of the national park!

The boundary of the park is an arbitrary line that sliced our orbit into illogi-

ROW A WILD RIVER!

Excellent guides teach you to row a great little one-person boat on the Green or San Juan Rivers.

TREK TO THE RAINBOW!

Hike through Navajoland to Rainbow Bridge. Discover ancient ruins in Grand Gulch.

Professional interpretation, delicious meals. Novice-intermediates & families welcome.

1979 Sierra Club Outfitter

Take a trip that will give you something extra in exchange for a little spunk!

Wild & Scenic, Inc.

Box 103-A, Marble Canyon, AZ 86030
602/256-2722. Patrick or Susan Conley

Adventure Sailing

Aegean Mexico Maldives Galapagos New Zealand Philippines Tonga Peru Hawaii

New 1980 Brochure now available!



1709 Bridgeway
Sausalito, CA 94965
415/332-4681

SKI-HIKER

... the painless way to travel

pain number one — MONEY

Ski-Hiker window mounting ski rack lets you save money for those important equipment purchases and the higher cost of getting to and from the ski areas.



SINGLE
carries 2 pr. cross country or 1 pr. alpine skis

DOUBLE
carries 4 pr. cross country or 2 pr. alpine skis

pain number two — FIDDLING AROUND

Ski-Hiker is window mounted and slips on (and off) as easily as the sturdy tray from a drive-in restaurant. It fits any car — large or small, American or Foreign — without adjustment. Switch cars or hang it on a friend's without hassle. (That way you don't always drive because you're the only one with a rack.)



pain number three — MAINTENANCE

With Ski-Hiker you can forget about taking your rack off to wash your car; rubbing compound to remove marks and scratches from your paint; shining up your ski rack. Ski-Hiker mounts only to glass where it cannot mar your car's finish. When not in use it stows easily inside unexposed to the elements. (This allows an easy run through the car wash.)

pain number four, five & six — WORRIES

Every Ski-Hiker comes complete with locks, and the rack is locked when the car is locked. Skis are carried without blocking vision and Ski-Hiker is aerodynamically safe and efficient in every wind condition at speed. Ski-Hiker is made of strong spring steel that is vinyl clad to protect your skin and car.

Ski-Hiker is sold* by most major ski shops and equipment dealers — or use the coupon below.

Yes, I need a painless way to carry my skis. Send me Ski-Hiker ski rack(s) as indicated.

Name _____

Address _____

City _____ State _____ Zip _____

(\$4.95 ea.) SKI-HIKER

(\$2.95 ea.) SKI-HIKER II

check color for red, screaming yellow

check enclosed Master Charge Visa

card no. _____ exp. date _____

RUFFOLO P.O. Box 597
Kenosha, WI 53141
414-652-3126



*Ski-Hiker is also available for rental at many ski shops.

WE KNOW ALASKA!

Alaska Travel Specialists has explored Alaska to bring you the best in uncrowded, real Alaskan adventure.

ADVENTURES FOR EVERYONE

From comfortable lodges and yacht cruises to guided backpacking, rafting, photography and fishing safaris. This issue featuring:

THE HUBBARD GLACIER EXPLORATION



We kayak into Russell Fjord and camp on Osier Island, 500 yards from the face of Hubbard Glacier, the fastest moving glacier in Alaska!

THE ALASKA ADVENTURE CATALOG describes this and over 80 other exciting adventures for 1980. Write or call us for your copy.



499 Hamilton #2125
Palo Alto, CA 94301

**IN CALIFORNIA PHONE 415-326-0586
ELSEWHERE TOLL FREE 800-227-8480**

cal segments. The need for extending the boundary is clear, but the extension proposal itself prompted the only physical intrusion of civilization into these wilds. There is no timber to cut, no valuable mineral hidden in the granite walls. There are no potential homesites on the ice, or even wild animals to hunt. Yet because the area was proposed for park expansion, and because he had that particularly Alaskan distrust of federal authority, Don Sheldon felt a need to guarantee that he could always land his ski plane in his favorite mountain's great shadow. By constructing a cabin and patenting the land as a "trade and manufacturing site," Sheldon secured his right to fly to his private holding.

We used the cabin for a most unconventional purpose. Our second food cache had been packed under Ned's supervision in his own basement by Doug and Alan, but it contained many items Ned had never seen. While I took him away on an afternoon ski tour, Doug and Alan redecorated the cabin. Ned walked in to the strains of "Happy Birthday" and was surrounded by crepe-paper streamers, toy hats, balloons, a cake with candles, and plastic toys for presents. It was his 33rd birthday, and we celebrated long into the night.

We waited out some stormy weather before heading up the north fork of the Ruth Glacier toward our final obstacle, the south buttress. Ruth Gap, the low point between the Ruth and Kahiltna glaciers, had never been crossed—and it still hasn't. It was overhung with ice, and we chose an easier though far higher route that took us up to the 12,000-foot elevation through steep seracs and traverses on blue ice. On the gap's opposite side, we descended in long rappels halfway through a jumble of ice blocks, spending a snowy night camped in the middle, and then avoided avalanche danger by rushing past the final cliffs in the early morning cold. An easy path led through the lower icefall to the east fork of the Kahiltna Glacier. On the afternoon of that day, our nineteenth, we spotted some ski tracks that were barely visible under the fresh snow. We wondered who else could possibly be skiing there. Then we realized we were looking at our own tracks from the first day. The circle was closed. □

Galen Rowell is author of Sierra Club Books' High and Wild: A Mountaineer's World.

WHICH EXERCISER PROVIDES
THE MOST IDEAL C.V. EXERCISE ?



Exercise Bike
Treadmill
NordicTrack

NordicTrack

**Jarless, Total-Body
Cardiovascular Exercise**

Duplicates XC Skiing for the
best motion in fitness

Better than treadmills . . . No body-damaging, jarring motion. Doesn't neglect the arms and shoulders. NordicTrack is smaller, lighter, more portable, doesn't require motors, costs far less.

Better than bikes . . . Stand-up position provides far more uniform leg muscle loading. Makes high heart rates easier to attain. Arms and shoulders exercised just as effectively as the legs. More muscle mass involved. Adjustable arm and leg resistance.

For more info: PSI 125 S Columbia Ct.
Chaska, MN 55318 612-448-6987

INTERNATIONAL ECOLOGY WORKSHOPS - 1980

GALAPAGOS ISLANDS - in private yacht; January thru June, December
INCA TRAIL - Inca world; June
KOMODO ISLANDS AND BORNEO extraordinary wildlife; July
ALASKA - birding special; July
SRI LANKA - Kandy festival; August
EAST AFRICA - game safaris; August
CHINA - special itinerary; September
AUSTRALIA - for naturalists; October
KILIMANJARO CLIMB - September
PATAGONIA AND THE FALKLANDS in depth study; November

And other scientifically led field trips to Costa Rica, Panama, Colombia, Machu Picchu and the Inca Trail.

Individually designed programs to the Galapagos, Amazon Basin, Andes, Falkland Islands, and throughout South America. Birding and wildlife our specialty.

HOLBROOK TRAVEL, INC.
3520 NW 13th Street
Gainesville FL 32601
(904) 377 7111



Rock Music

For the ears and the eyes: the sights and sounds of natural places, naturally pleasing.

This is wilderness—the home of wildlife and the barometer of this planet's ecological balance.

Wilderness is one of the primary reasons for the Sierra Club. And the members of the Sierra Club are the reason behind 87 years of effective action to preserve our natural heritage.

You can help, too. Add your voice on behalf of all that is defenseless and irreplaceable—join the Sierra Club and help preserve the sounds of wilderness forever.



Sierra Club

A way for wilderness to be heard

MEMBERSHIP FORM

YES, I want to join! Please enter a membership in the category checked below:

New Member Name: _____

Address _____

Zip _____

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

Donor Name: _____

Address _____

Zip _____

GIFT MEMBERSHIPS 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.

MEMBERSHIP CATEGORIES

	Individual	
	Dues	Joint
Regular	<input type="checkbox"/> \$ 25	<input type="checkbox"/> \$ 29
Supporting	<input type="checkbox"/> 40	<input type="checkbox"/> 44
Contributing	<input type="checkbox"/> 100	<input type="checkbox"/> 104
Senior	<input type="checkbox"/> 12	<input type="checkbox"/> 16
Student	<input type="checkbox"/> 12	<input type="checkbox"/> 16
Junior	<input type="checkbox"/> 12	—

LIFE MEMBERSHIP

Per Person \$750

Spouse of Life Member 12

(annual dues)

All dues include subscription to *Sierra* (3.00) and chapter publications (1.00).

Mail to:

Sierra Club

DEPARTMENT S-002

P.O. BOX 7959, RINCON ANNEX

SAN FRANCISCO, CA 94120

MEMBERSHIP FORM

YES, I want to join! Please enter a membership in the category checked below:

New Member Name: _____

Address _____

Zip _____

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

Donor Name: _____

Address _____

Zip _____

GIFT MEMBERSHIPS 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.

MEMBERSHIP CATEGORIES

	Individual	
	Dues	Joint
Regular	<input type="checkbox"/> \$ 25	<input type="checkbox"/> \$ 29
Supporting	<input type="checkbox"/> 40	<input type="checkbox"/> 44
Contributing	<input type="checkbox"/> 100	<input type="checkbox"/> 104
Senior	<input type="checkbox"/> 12	<input type="checkbox"/> 16
Student	<input type="checkbox"/> 12	<input type="checkbox"/> 16
Junior	<input type="checkbox"/> 12	—

LIFE MEMBERSHIP

Per Person \$750

Spouse of Life Member 12

(annual dues)

All dues include subscription to *Sierra* (3.00) and chapter publications (1.00).

Mail to:

Sierra Club

DEPARTMENT S-002

P.O. BOX 7959, RINCON ANNEX

SAN FRANCISCO, CA 94120

The Sagebrush Rebellion

RUSS SHAY

Scott Henry—Las Vegas Review-Journal



Much of the land at stake in the "Sagebrush Rebellion" is desert like this, in the foothills of Nevada's Spring Mountains. Too arid for ranching, much of this public land may contain substantial oil reserves.

An attempted theft is going on, and what's being taken belongs to all of us—public lands. The would-be thieves are proud of their ambitious enterprise and have been publicizing it as the "Sagebrush Rebellion." Whether they succeed will depend largely on whether the public awakens before the jewels have disappeared.

At stake are 175 million acres of western wildlands administered by the Department of the Interior's Bureau of Land Management (BLM)—an area the size of California, Oregon and Massachusetts combined. The acreage includes deserts, grasslands, canyonlands, forests and mountain ranges throughout the West, including many areas of *de facto* wilderness.

The central theme of the Sagebrush Rebellion is the proposed wholesale transfer of federal lands to state governments. The idea does have a gut-level appeal to anti-bureaucracy, home-rule

sentiments shared by many. But the actual result would be the undoing of decades of work by conservationists for stewardship of these lands.

The federal agencies that now manage these western lands bring far more than bureaucracy with them. They bring the Wilderness Act of 1964; BLM is now studying its lands for possible additions to the National Wilderness Preservation System. They bring the National Environmental Policy Act (NEPA), which requires federal agencies to consider and document the environmental effects of their management decisions. And they bring the Federal Land Policy and Management Act of 1976 (FLPMA), which requires the BLM to manage its lands for public access, for sustained yield and for multiple use, considering the needs of wildlife as well as domestic livestock.

What would state ownership mean? One can only conjecture, but it is clear that supporters of the Sagebrush Rebel-

Grazing and Overgrazing

Domestic livestock grazing is one of the principal uses of the 175 million acres of western lands administered by the BLM, and overgrazing of these lands has become a major abuse. The Bureau of Land Management, the Council on Environmental Quality, the General Accounting Office (Congress's investigative arm) and many other agencies and researchers have blamed overgrazing for widespread, severe environmental degradation of BLM lands.

When livestock consume grasses and other forage vegetation beyond the plants' ability to renew themselves, they begin to disappear from the range. Without plant cover to shield and hold the soil, erosion increases. Soil is lost, the land loses its ability to hold moisture and support plant life, and eroded silt fouls waterways. When weeds begin to take over, the overall result is that a healthy ecosystem is ruined. Its long-term productivity is reduced, for use by livestock as well as by wildlife, and its value as watershed and for all other range uses is destroyed.

The BLM estimates that 84% of its rangelands are in no better than fair condition; that almost half of its lands are in an unacceptable state of erosion; and that its wildlife habitats are deteriorating. One anticipated result is that half of the endangered species now identified on BLM lands will be extinct by the year 2000. Poorly managed grazing is at the root of many of these problems.

In an attempt to improve the condition of its lands and to protect its resources, the BLM has been revising its management plans. For many areas the agency has demonstrated the need to cut back grazing, and it wants to reduce the number of livestock and the length of the grazing season.

The agency is meeting stiff resistance. Though ranchers who use BLM lands would benefit greatly from improved range conditions, many of them are unwilling to face the short-term economic problems grazing limitations would cause.

Though the ranchers complain the BLM is putting them out of business, the truth is that their businesses are not in good shape to begin with. They find it more and more difficult to compete as a minor group in the national market. Rangelands produce only 15% of the nation's livestock roughage (crop silage and pastures provide the rest); the BLM lands produce only 8% of that. In other words, BLM lands provide about 1% of the nation's livestock roughage. Increasingly, the livestock industry is dominated not by cowboys on the open range but by stockmen in states such as Florida, where more cattle are produced than on all BLM lands.

Though public-lands ranchers are a small group, they are economically important to many small towns in the West, and they exercise political influence far greater than would be expected from their numbers or their economic power. They have used that political power to win substantial public subsidies. Ranchers who use BLM lands benefit from cheap grazing fees (often less than one half those on similar but privately owned lands); from federally financed improvements such as new wells and fencing; and from the economic advantage of using their government grazing permits as collateral for loans.

Ranchers are now using this power to stop the BLM's plans to reduce grazing, even though the plans also call for multimillion-dollar investments by the BLM to accelerate improvement in range conditions.

In effect, the people opposing grazing reductions are asking the public to continue the one subsidy that could not possibly be justified—the one paid not in tax dollars, but in destruction of the very environment that furnishes their livelihood. □

lion think their states will do better by them than does the BLM. Ranchers anticipate the freedom to manage these lands as if they were no more than livestock factories. Developers and speculators fully expect the states to sell the lands into private ownership, cutting up the open spaces of the West for subdivisions and industrial parks. Utilities expect *carte blanche* for powerplant siting and powerline rights-of-way. Miners and the oil and gas industry expect freedom to dig and drill wherever and however they like. Given the present politics of many western states, these groups may well get their way.

The Sagebrush Rebellion is simply a land grab, an attempt to take lands from the public for the profit of private parties. Its support comes largely from those who figure to gain financially or politically from removing the federal government and its commitment to conservation and multiple-use management.

A little historical background provides an illuminating perspective on the Sagebrush Rebellion and the forces behind it. In the 1940s and 1950s, the U.S. Forest Service began reducing the numbers of cattle and sheep permitted to graze on lands that were part of national forests. The reason for the reduction was simple: The forests were overgrazed. Overgrazed rangelands deteriorate—grasses decrease, weeds invade and soil erosion increases.

In response to the curtailed grazing, some ranchers got their congressional representatives to launch a series of hearings that attacked the Forest Service and to propose the sale of its rangelands to the livestock interests.

That movement failed because conservationists were able to interest people other than the ranchers in this attempt to appropriate lands that belong to all Americans—urbanites and easterners as well.

Conservationists have worked for decades to improve the management of BLM lands and have had notable success in the past few years. Of particular importance were passage of the FLPMA and the success of a lawsuit forcing the BLM to recognize that its grazing policies have significant environmental impacts that must be analyzed in Environmental Impact Statements.

These two changes have advanced the quality of BLM land management to that attained by the Forest Service 25 years ago. BLM is now replanning its grazing management, and in many areas this means reducing the numbers of livestock that graze on BLM lands. Now, sud-



TREKKING & RIVER-RUNNING IN NEPAL
AND
OVERLAND CAMPING EXPEDITIONS
TO REMOTE REGIONS OF
ASIA, AFRICA & SOUTH AMERICA
FROM 2-17 WEEKS FROM \$320-\$3500

ENCOUNTER OVERLAND

309 PINE STREET, No. 5565
SAN FRANCISCO, CALIFORNIA 94104 (415) 421-7999

BRITAIN For The American Wanderer.

Backpack over the highest mountains of England, Scotland and Wales. Visit the most beautiful parts of Britain and its most historic towns through our unique holidays.

- 7 days . . . \$430
- 10 days . . . \$550
- 14 days . . . \$695

Brochure from: David Prior, 445 East 80th St., Apt. 19A, New York, NY 10021 or phone (212) 628-8528.

TRAVELEARN JULY 1980

AFRICA • HAWAII
GREECE • CHINA
FRANCE • TRAVEL ADVENTURES
IN LEARNING
FOR ADULTS

DETAILED ITINERARIES CALL OR WRITE: OFFICE
INTERNATIONAL STUDIES, Keon College, Morris
Ave., Union, N.J. 07083 • (201) 527-2166

*Fine
Down
Comforters*

Made with the finest materials available. In delicious colors: flamingo, mink, natural or powder blue.

Send fifty dollars for a color brochure and fabric samples. 100 South First Street
Western Mountaineering, San Francisco, California 94103

denly, local politicians are trying to take the affected lands away from the federal government. This is not a coincidence.

Can the Sagebrush Rebellion succeed? Congressional legislation (such as Senator Orrin Hatch's (R-Utah) S. 1680) to transfer BLM lands to the states—does not seem to be going anywhere—but that situation could change after the next election. Republican presidential candidate John Connally has endorsed the goals of the Sagebrush Rebellion, and several other Republican hopefuls are considering similar positions.

In 1979, Nevada's state legislature passed a law claiming ownership of federal lands within its borders, and other western states are expected to follow suit in 1980. Legislation proposed in some states would claim the national forests—including their wilderness areas—as well as BLM lands. Proponents of the Sagebrush Rebellion have advocated putting the Nevada law into action through a lawsuit to wrest BLM lands from the federal government. The legal basis for such a suit, however, is dubious at best.

But the Rebellion does not need a clear-cut victory to succeed. It is already succeeding. It has put BLM personnel on the defensive, impeding their ability to manage agency lands. And it has conferred an aura of respectability on the championing of private rather than public interests in managing public lands.

The effects are already evident. In November, several western congressmen (led by Senator James McClure of Idaho) attached a rider to an appropriations bill, limiting the BLM's ability to enforce grazing restrictions. In effect, they succeeded in getting Congress to condone continued overgrazing on public lands—an action with severe environmental consequences for millions of acres of rangelands.

Last year, off-road motorcyclists staged an illegal race across BLM desert lands in California as a "protest" against BLM's refusal to grant a permit for the race because of environmental considerations. Five hundred motorcyclists rode the course without the permit, and the BLM was unable to successfully prosecute the organizers of the event. This year, the bikers will again run in defiance of the BLM.

A letter sent by a county livestock association to Arizona congressmen last year resulted in the transfer of a BLM manager out of the county. His crime? He fined three ranchers for having 1058 more

PACK US ON YOUR NEXT ADVENTURE



The LOWE EXPEDITION PACK carried to the summits of Everest and K-2, the choice of top American Mountaineers and backpackers.

Send one dollar for catalogue
SC-5 P.O. Box 189, Lafayette, Co. 80026



University of California, Berkeley

RESEARCH EXPEDITIONS PROGRAM



YOU could

- Study Folk Traditions of Carnival in Trinidad
- Excavate an Early California Coal Mining Town
- Track Forest Monkeys in Kenya
- Map Egypt's Valley of the Kings
- Study Coral Reef Ecology in Jamaica
- Record Temple Art in Thailand
- Collect Unusual Plants in Africa
- Explore Elephant Seal Behavior in Argentina

UREP offers you the opportunity to be an active member of a small field research team. Your participation and tax deductible contribution make it possible.

**NO PREVIOUS EXPERIENCE
NECESSARY.
YOUR SKILLS CAN HELP!**

For more information on these and other expeditions, contact:

University Research Expeditions Program
(UREP), Desk SC
University of California
Berkeley, CA 94720 or Phone (415) 642-6586

**WALK THE CENTRAL BROOKS RANGE!
EXPERIENCE THE RUGGEDNESS OF NORTHERN ALASKA!**

After bush pilots fly you to historic Anaktuvuk Pass, an experienced guide will accompany your group on a 75-mile wilderness hike to remote Mt. Doonerak. From there you will raft down the Koyukuk River through the Gates of the Arctic. Participate in the adventure of a lifetime. Book now for tours beginning June 15th through September 15th.

BACKPACK THE BROOKS!
Experience Something New!

— WRITE TO —

**ALASKA
FISH and TRAILS
UNLIMITED**

c/o Jerald D. Stansel
S.R. Box 20154-X
Fairbanks, Alaska 99701

CALL (907) 479-4012 or 455-6012



cattle grazing on BLM lands than their permits allowed.

All these actions are part of an emerging pattern of effective resistance by private interests to modern multiple-use management of western public lands. The cumulative effect could be as destructive as the wholesale transfer of lands to the states. The public still retains title, but the management of the lands is being surrendered, piece by piece, to private groups who take no responsibility for stewardship and have no apparent interest in wildlife, watershed preservation, endangered species, wilderness, open space, scenic beauty or any other resource that can't be cashed in like so many poker chips.

The current Sagebrush Rebellion is a repeat of past attempts to steal public lands and their resources. Historian Bernard DeVoto's reports in *Harper's* magazine were widely credited with upsetting eerily similar attempts in the 1940s. The following passage is taken from articles he wrote in 1948:

"The attack . . . is part of an unceasing, many-sided effort to discredit all conservation bureaus of the government, to discredit conservation itself. It is a stubborn effort to mislead the public. Conceivably it could succeed. Ever since the public lands were first withdrawn from private exploitation, the natural resources they contain have been a challenge and a lodestar to interests that were frustrated when the reserves were made. Those interests are much more powerful now than they were then. The natural resources husbanded for the common good have enormously increased in value. The consumption of natural resources not publicly reserved has astronomically increased the lust to get at those that have been saved.

"The danger is not western; it is national. If the West cannot control the exceedingly small number of people whose program would destroy it, the rest of the country will have to control them for the West's sake and its own. Up to 20 western votes in Congress might be swung to support that program, and such a bloc might be enough to hold the balance of power. But your representative has a vote that counts as much as any other. Better make sure that he does not cast it on this issue in ignorance of what is at stake."

These words are as true now as they were in 1948. □

Russ Shay is the Sierra Club's public lands representative for California and Nevada.

Workhorse!



Coleman
Peak I Stove

The Peak I is Coleman's lightweight backpacking stove featuring: The Coleman no-priming, pressure pump system; (boils 1 qt. of water in less than 4 minutes); the efficient X-shaped windscreens/pot stand; and 10 oz. fuel tank. Weight 32 oz., Height 6 1/4", Width 4 1/4". **\$32.80** (postpaid).

Order Today! Fully Guaranteed!

Enclosed to check Visa MC
(Calif. add 6% sales tax)
Card # _____ Exp. Date _____
Name _____
Address _____
City _____
State _____ Zip _____

Send for New Free Color Catalog!



**CO-OP
WILDERNESS
SUPPLY**

1607 Shattuck Ave., Dept. 8CB
Berkeley, CA 94709

For Women Only!



Functional, durable outdoor wear designed to fit and flatter the active woman.

Send for free catalog



Caribou Mountaineering
P.O. Box 3696-5 Chico, CA 95927

Wilderness Adventure

Sierra Club Trips

Don't Miss All The Fun

Join a Sierra Club wilderness outing and find out why the Club is working so hard to save those wonderful places. After all, one of our goals is to explore and enjoy as well as protect the wild areas of the world.

Club outings make it easy, even for beginners, to enjoy the wilderness experience in a manner not soon to be forgotten. We've had 78 years' practice in leading groups of young and old, experts and greenhorns. So, whether you choose a jaunt in the Sierra, a raft trip on the Snake, or something a bit more daring in the Himalayas, Club leaders can take you there and get you back, eager for another adventure next year.



Write For Your Free Catalog

If you received the 1979 Catalog, your free 1980 catalog was sent to you in early January. If you didn't get a catalog last year or if you've moved since then, send a change of address card (if appropriate)

or a postcard with your name and address to:

Sierra Club Outing Catalog
530 Bush Street
San Francisco, CA 94108

Plan a Vacation You'll Never Forget

While winter weather keeps you inside, use your catalog to select a wilderness adventure that fits you and start dreaming. You will never forget your Sierra Club trip.

NOW—turn the page for a listing of 1980 outings . . .

More Than 250 Exciting Trips

- Alaska Trips
- Backpacking
- Base Camps
- Bicycling
- Burro Trips
- Canoeing
- Caving
- Family Trips
- Foreign Trips
- Hawaii Trips
- Highlight Trips
- Junior Backpack Trips
- Raft & Boat Trips
- Service Trips
- Ski Touring

1980 Sierra Club Outings

David Swanson



Trip Number E = Educational outing
 • = Leader approval required

Date

Trip fee
(incl. Deposit) Deposit Leader

Alaska Trips (See Raft Trips for other Alaska outings.)

50	• Arctic National Wildlife Range Backpack	June 6-20	375	35	Molly McCammon
51	• Philip Smith Mountains, Brooks Range Backpack	June 16-26	470	35	Joan Laue & Bill Huntley
52	• Sailing and Whale Watching on Prince William Sound	June 27-July 10	975	70*	David Finkelstein
53	• Turquoise Lake Backpack, Lake Clark National Monument	June 29-July 10	390	35	Pete Nelson
54	• McKinley Park/Harding Icefield/Kenai Fjords Backpack Sampler	July 24-Aug. 15	1060	70*	Kathy & Robin Brooks

*Per person deposit

Trip Number	T = Educational outing • = Leader approval required	Date	Trip fee (Incl. Deposit)	Deposit	Leader
-------------	--	------	-----------------------------	---------	--------

Backpack Trips (See Alaska, Canoe, Hawaii and Service for other backpack trips.)

35	•Desert Spring, Superstition Wilderness, Arizona	March 2-8	135	35	John Peck
36	•Grand Canyon, Arizona	March 29-April 5	190	35	Tom Pillsbury
37-E	•Ventana After the Fire, Los Padres Forest, California	March 29-April 5	115	35	Bob Berges
38	•North Rim, Grand Canyon, Arizona	April 13-19	185	35	Bill Wahl
39	•Guadalupe Mountains, Guadalupe Park, Texas	April 20-26	170	35	Steve Hanson
40	•Kanab Canyon/Tapeats Creek, Grand Canyon, Arizona	May 10-17	165	35	Ginger Harmon
41	•West Virginia Highlands	May 18-24	125	35	Dick Williams
42	•Dark Canyon Primitive Area, Utah	May 18-24	215	35	Gene Andreasen
45	•Land Between the Lakes, Kentucky	May 18-25	165	35	Rick Egedi
43-E	•Grand Gulch Natural History, Utah	May 24-31	210	35	Pete Nelson
44	•Pink Beds of Pisgah Forest, North Carolina	June 1-8	135	35	Marilyn & Cliff Ham
138	•Skyline Trail, Pecos Wilderness, New Mexico	June 7-13	145	35	Joanne Sprenger
139	•Cascades Crest, Willamette Forest, Oregon	June 15-23	155	35	Bill Bankston
140	•Original Gila Wilderness, New Mexico	June 15-28	280	35	John Colburn
141	•Thurston Peaks, Trinity Alps, California	June 22-28	105	35	Don Parachini
142	•Owyhee Canyon, BLM Proposed Wilderness, Oregon	June 22-29	170	35	Holly Jones & Colleen Gooding
143	•Forgotten Canyon Leisure Loop, Golden Trout Wilderness/Sequoia Park, Sierra	June 23-July 3	160	35	Virgene & Charles Engberg
144	•Trinity Alps, Shasta-Trinity Forest, California	July 1-9	130	35	Bill Bankston
145	•Snowbird Creek/Slickrock Wilderness, Nantahala Forest, North Carolina	July 4-12	185	35	Dave Bennie
146	•Blossom Lake Leisure Loop, Sequoia Forest, Sierra	July 4-13	155	35	Len Lewis
147	•Diamond-Thielsens Wilderness, Cascade Range, Oregon	July 4-13	175	35	Holly Jones
148	•Kern Hot Springs, Sequoia Park, Sierra	July 5-12	115	35	Don Lackowski
149	•Mt. Tallac, Desolation Wilderness, Sierra	July 6-12	105	35	Ginger Harmon
150	•Great Western Divide/Table Mountain Loop, Sequoia Park, Sierra	July 11-20	140	35	Jeff Lee
151	•Weminuche Wilderness, Colorado	July 13-19	160	35	Don Lyngholm
152	•Lost Hat Leisure Loop, Bridger Wilderness, Wyoming	July 13-19	145	35	Virgene & Charles Engberg
153	•Sequoia High Country Vegetarian Trip, Sequoia Park, Sierra	July 13-22	135	35	Louise & Calvin French
154	•Mt. Jefferson Wilderness, Cascade Range, Oregon	July 14-21	150	35	Bill Gifford
155	•Rito Alto Peak, Sangre De Cristo Range, Colorado	July 14-25	190	35	Bob Berges
156	•Granite Hot Springs, Teton Forest, Wyoming	July 17-23	130	35	c/o John Stansfield
157	•Moon Lake, John Muir Wilderness, Sierra Forest	July 19-27	130	35	Raleigh Ellisen
158	•Continental Divide, Weminuche Wilderness, Colorado	July 19-27	185	35	Myron Hulén
159	•Sally Keyes/Marie Lake Leisure, John Muir Wilderness, Sierra Forest	July 24-Aug. 2	150	35	Ray Collins
160	•Adirondack Mountains, Adirondack Park, New York	July 26-Aug. 2	155	35	Grace Adams
161	•Emigrant Basin to Tower Peak, Stanislaus Forest/Yosemite Park, Sierra	July 26-Aug. 3	130	35	Carl Heller
162	•Teton Wilderness, Bridger-Teton Forest, Wyoming	July 26-Aug. 4	185	35	Bill Bankston
163	•Middle Fork Leisure Loop, Bridger Wilderness, Wyoming	July 27-Aug. 2	145	35	Virgene & Charles Engberg
164	•Golden Trout Creek, Sequoia Park and Forest, Sierra	August 2-10	130	35	Ken Maas
165	•Sawtooth Wilderness Leisure, Sawtooth Forest, Idaho	August 3-9	140	35	Harold Covey
166	•Thunder Canyon, Kings Canyon/Sequoia Parks, Sierra	August 3-11	155	35	Phil Gowing
167	•Northern Yosemite Peaks and Canyons, Sierra	August 3-11	130	35	Cal French
168	•Kern River Headwaters, Sequoia Park, Sierra	August 4-12	130	35	Ralph Huntoon
169	•Wallowa Mountains, Wallowa-Whitman Forest, Oregon	August 7-15	165	35	Bill Bankston
170	•Black Hills Leisure, South Dakota	August 10-16	175	35	Faye Sitzman
171	•Wahoo Lakes, Sierra/Inyo Forests, Sierra	August 10-16	115	35	Eric Bergh
172	•Grinnell Lake, John Muir Wilderness, Sierra	August 11-18	145	35	Jim Gilbreath
173	•Purcell Alpine Trek, Purcell Mountains, British Columbia	August 12-21	220	35	Scott Rowed
174	•Snowside Peak, Sawtooth Wilderness, Idaho	August 17-23	130	35	Veda Scherer
175	•Symphony Lake, Coast Range, British Columbia	August 19-28	490	35	Tom Erwin
176	•Duke River Valley, Kluane Park, Yukon, Canada	August 20-29	340	35	Doug Harvey
177	•Wampum Lake, John Muir Wilderness, Sierra	August 21-30	155	35	Gordon Peterson
178	•Margaret Lakes/Silver Divide, Sierra Forest	August 24-31	120	35	Wes Reynolds
179	•Kings/Kern Divide, Kings Canyon/Sequoia Parks, Sierra	Aug. 29-Sept. 6	130	35	Don Lackowski
180	•Kings Peak, High Uinta Primitive Area, Utah	Aug. 30-Sept. 6	180	35	Pete Nelson
181	•"Lost Coast," King Range Conservation Area, California	Aug. 31-Sept. 6	105	35	Ellen Howard
182	•Palisades, Kings Canyon Park, Sierra	September 2-11	155	35	Ann Peterson
183	•Mount Lassen and Caribou Wilderness, California	September 13-20	115	35	Grace Adams
184	•La Cloche Range, Killarney Park, Ontario, Canada	September 13-20	190	35	Karen Benzing
185	•Kings Canyon in the Fall, Kings Canyon Park, Sierra	September 14-21	115	35	Paul Von Normann
186	•Glacier Peak Wilderness Additions, North Cascades, Washington	September 16-25	170	35	Marty & Alan Schmierer
187	•Southern Shenandoah, Virginia	September 20-26	145	35	Ray Abercrombie
188	•Escalante River, Utah	October 5-11	175	35	Norman Elliott
189	•Quehanna Trail, Black Moshannon Forest, Pennsylvania	October 5-11	145	35	Connie Thomas
190	•Kanab Canyon/Thunder River, Grand Canyon, Arizona	October 5-11	160	35	Nancy Wahl
191	•Appalachian Trail Colors, Nantahala Forest, North Carolina	October 11-18	170	35	Dave Bennie
192	•Grand Canyon, Arizona	Dec. 28-Jan. 3	185	35	Bill Wahl

Trip Number	Trip Description	Date	Trip Fee (Incl. Deposit)	Deposit	Leader
-------------	------------------	------	--------------------------	---------	--------

Junior Backpack Trips

205	•Around Black Kaweah, Sequoia Park, Sierra	June 21-29	135	35	Patrick Colgan
206	•Hutching Creek/Unnamed Peak, Yosemite Park, Sierra	July 2-9	125	35	Lynn McClellan-Loots
207	•Monarch Divide, Kings Canyon Park, Sierra	July 18-27	150	35	Vicky & Bill Hoover
208	•Tuolumne Meadows to Matterhorn Peak, Yosemite Park, Sierra	July 20-26	110	35	Bobbie & Emilio Garcia
209	•White Clouds Older Teens, Challis Forest, Idaho	July 21-30	160	35	David Neumann
210	•Bench Canyon, Sierra Forest	July 27-Aug. 3	125	35	Christine Dienger
211	•Evolution Basin, Kings Canyon Park, Sierra	August 3-10	125	35	Ellen & Jim Absher
212	•Wind River/Mammoth Glacier, Bridger Wilderness, Wyoming	August 22-31	160	35	John Carter

Base Camp Trips (See Canoe, Hawaii, Ski and Wilderness Threshold Trips for other Base Camp outings.)

28-E	Natural History of the Anza-Borrego Desert, California	March 30-April 5	185	35	Bill Kershaw
60-E	Natural History of Mono Basin, California	June 14-21	170	35	Ray Des Camp
61	Talchako Lodge and Tweedsmuir Park, British Columbia	June 16-22	255	35	Katie Hayhurst & Dennis Kuch
62	Dinkey Lakes, Sierra Forest	July 6-13	185 [†]	35	Perry Harris
63	•Midnight Lake Mountaineering Camp, John Muir Wilderness, Sierra	July 6-20	290	35	Sy Ossosofsky
64	Dinkey Lakes, Sierra Forest	July 13-20	185 [†]	35	Perry Harris
65	Long Lake, John Muir Wilderness, Inyo Forest, Sierra	July 13-20	185 [†]	35	Ed Miller
66	Long Lake, John Muir Wilderness, Inyo Forest, Sierra	July 20-27	185 [†]	35	Ed Miller
67	Minarets-West Alpine Camp, Minarets Wilderness, Sierra Forest	July 20-Aug. 1	280	35	John Freiermuth
68	Merced Peak Back Country Camp, Yosemite Park, Sierra	July 26-Aug. 9	390	35	Ray Des Camp
69	Mary Louise Lakes, John Muir Wilderness, Inyo Forest, Sierra	July 27-Aug. 3	185 [†]	35	Joanne Barnes
70	Mary Louise Lakes, John Muir Wilderness, Inyo Forest, Sierra	August 3-10	185 [†]	35	Joanne Barnes
71	Second Recess Alpine Camp, John Muir Wilderness, Sierra Forest	August 3-15	280	35	Bob Cockrell
73	Badger Lakes, Minarets Wilderness, Inyo Forest, Sierra	August 4-11	185 [†]	35	Serge Puchert
74	Rangeley Lakes, Maine	August 10-16	205	35	Russ Calkins
75	Granite Park Alpine Camp, John Muir Wilderness, Sierra	August 10-22	280	35	Dick Raines & Norm Kindig
76	Badger Lakes, Minarets Wilderness, Inyo Forest, Sierra	August 11-18	185 [†]	35	Bill Kershaw
77	Seville Lake Alpine Camp, Kings Canyon Park, Sierra	August 17-29	280	35	Emily Benner
78	Caving, Albany County, New York	Aug. 31-Sept. 6	170	35	Fred J. Anders
79	Christmas at Death Valley, Death Valley Monument, California	December 21-30	190	35	Dolph Amster

[†]Children under 12, \$165.

Bicycle Trips (See 1981 Foreign Trips for another bicycle outing.)

81	•California Coastline Bike and Hike	May 24-June 1	145	35	Bob Hartman
82	•Bicycle Tour of Kauai, Hawaii	July 14-28	435**	35	Bob Powers
83	•Maui by Bicycle, Hawaii	July 31-Aug. 14	440**	35	John Finch
84	•Cape Cod Bike, Massachusetts	August 17-23	190	35	Joan Miller
85	•Chesapeake & Ohio Canal Bicycle Ride, Maryland	September 21-27	170	35	Jim Clarke
86	•Amish Country, Lancaster County, Pennsylvania	October 12-18	185	35	Herb Schwartz

**Trip prices do not include airfare.

Burro Trips

27	Panamint Mountains, Death Valley, California	March 30-April 5	250	35	John McClure
90	Symmes Creek to Onion Valley, Inyo Forest/Sequoia Park, Sierra	July 12-19	240	35	Jim Gayner
91-E	Onion Valley to Division Creek, Inyo Forest/Kings Canyon Park, Sierra	July 19-26	270	35	Linda Furtado
92	Division Creek to Taboose Creek, Inyo Forest/Kings Canyon Park, Sierra	July 26-Aug. 2	240	35	Don White
93	Taboose Creek to South Fork, Bishop Creek, Inyo Forest/Kings Canyon Park, Sierra	August 2-9	240	35	Jack Holmes
94-E	Northlake to Pine Creek, John Muir Wilderness, Sierra	August 9-16	270	35	Richard Cooper
95	Rock Creek to McGee Creek, John Muir Wilderness, Sierra	August 16-23	240	35	Ted Bradfield
96	McGee Creek to Lake Mary, John Muir Wilderness, Sierra	August 23-30	240	35	Doug Parr
97	Lake Mary to Red's Meadow, John Muir Wilderness, Sierra	Aug. 30-Sept. 6	240	35	Jack Costello

Free Catalog

The new Early Winters Catalog of unique outdoor equipment is just off the press and loaded with new & exciting items . . . many of which can't be seen or purchased anywhere else!

If the card is missing, drop us a line for your big, new copy.

Early Winters, Ltd.

110-UQ Prefontaine Pl. S., Seattle, WA 98104



Enjoy the Early Winters catalog of fine outdoor equipment

The Early Winters catalog is a fascinating source book of unique and lightweight outdoor gear, much of which can't be seen or purchased anywhere else in the world!

You'll find a treasure trove of exciting outdoor equipment—all of it guaranteed to increase the pleasure of your outdoor experience.

Send this card today for your free copy . . . it's packed with scores of color pictures and thousands of words of descriptive copy. You'll enjoy reading the Early Winters catalog!

Just fill in your name and address on the reverse side of this card, and mail today! Or call (206) 622-5203 anytime!

send today for your FREE copy!

Free NRS CATALOG

Explore the rivers of the world with equipment from Northwest River Supplies. Order your free 1980 catalog today.

NORTHWEST RIVER SUPPLIES
Rafts, Kayaks, Canoes, and River Equipment

Please send me your free catalog. Thanks

Name _____
Address _____
City _____ State _____ Zip _____
Northwest River Supplies
P.O. Box 91989
Moscow, Idaho 83843



FROM NORTHWEST RIVER SUPPLIES — THE COMPLETE RIVER CATALOG

See the best and the latest in rafts, kayaks, canoes and whitewater equipment from Northwest River Supplies. Order reasonably-priced quality river equipment tested by the people who sell it. Order our 1980 catalog today.

Yes—Please send my free catalog today

MY NAME

NAME

ADDRESS

CITY

STATE

AND A FRIEND'S

NAME

ADDRESS

CITY

STATE

ZIP

ZIP

S

For your copy of our 1980, full-color catalog of specialized outdoor travel gear and list of Authorized Cannondale Dealers nearest you, write:

Cannondale Corporation
Department S
35 Pulaski Street
Stamford, CT 06902

or call:
(203) 395-1705



cannondale

Cannondale manufactures superior quality clothing and equipment for the outdoor enthusiast.

This includes our insulated parkas and vests, beautifully tailored shell jackets, top-rated tents, specialized sleeping bags, hybrid internal/external framepack, super softpacks and fannypacks, the finest bicycle bags and touring systems made, and the world's only professional bicycle trailer.

Write for our free, full color catalog and enjoy . . .

Name _____

Address _____

City _____ State _____ Zip _____

FROM:

Name _____

Address _____

City/State/Zip _____

Please
Place
Stamp
Here

*Mail today for your
FREE COPY!*

TO:

Early Winters, Ltd.

110 Prefontaine Place S.
Seattle, Washington 98104

UQ



NEW CATALOG...
put off the past & loaded
with new & exciting items
... most of which simply
can't be seen or purchased
anywhere else!

FREE COLOR CATALOG

Mail this
card today
for your copy!

• Thousands of items
• No sales tax

Note: If you have received any of our catalogs during the past year, you'll automatically be sent this new issue. You might like to pass this card along to a friend.



Please
Place
Stamp
Here

Northwest River Supplies

P.O. Box 9186S
Moscow, ID 83843

Sorry—our order form
is gone, but you can still
order your free 1980
Whitewater Catalog from:

Northwest River Supplies
P.O. Box 9186S
Moscow, Idaho 83843
Or Call: (208) 882-2383



place
postage
here

Cannondale

35 Pulaski Street
Stamford, Connecticut 06902

Cannondale

designed for your
good shape

Free EMS CATALOG



Before you explore the great outdoors, explore the EMS catalog. The latest full-color edition has wide selections of outdoor equipment and clothing. Great gift ideas, too!

Eastern Mountain Sports, Inc.
Specialists in Outdoor Equipment and Clothing

Please send me your FREE catalog. Thanks.

Eastern Mountain Sports, 16201 Vose Farm Road
Peterborough, NH 03458

Name _____
Address _____
City _____
State/Zip _____

GOING OUTSIDE...



...to hike, scramble up granite cliffs, explore back country on foot or in a canoe, or just to enjoy the great outdoors? You'll have more fun, be more comfortable, when you venture forth properly equipped and clothed.

Eastern Mountain Sports Catalog Send for your free copy

GUARANTEE: EMS guarantees satisfaction with each and every product we sell.

One copy for me, please.

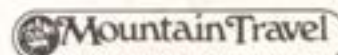
Name _____
Address _____
City _____
State/Zip _____

One copy for my friend.

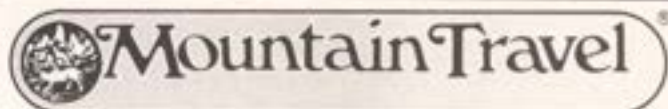
Name _____
Address _____
City _____
State/Zip _____

Ever thought of trekking to Mt. Everest, hiking across the Andes to Machu Picchu, crossing the Sahara on a camel safari, or rafting on a wild arctic river?

Send for the free 1980 Mountain Travel catalog of expeditions and outings on 5 continents.



1398 Solano Avenue
Albany, Ca. 94706



Expeditions & Outings to Remote Wilderness Areas of the World

Send this card to receive a free copy of the new 1980 Mountain Travel Catalog, a 72-page, full color "dream book" of adventure travel. Mountain Travel, the oldest and largest adventure travel firm, offers expeditions to the world's most remote and beautiful environments, from the Himalayas to the Hebrides, from the Andes to Alaska, for hikers, climbers and adventurers.

Name _____

Street _____

City _____ State _____ Zip _____



Special Limited-time Wall Plaque offer to Sierra readers... expires March 15, 1980.

TURN YOUR FAVORITE OUTDOOR OR HOLIDAY PHOTO INTO A MAGNIFICENT WALL PLAQUE

Color King, the film lab serving professionals, will turn your favorite photo into a treasured work of art.

Expert color print quality plus the rich look of hand-carved, weathered wood. Each print is expertly fitted to the exact contours of the plaque for a dramatic 3-dimensional effect. **MONEY-BACK SATISFACTION GUARANTEE.**

Print size	Price (incl. postage)
8 x 10	\$16.25
11 x 14	\$24.90
16 x 20	\$44.10
20 x 24	\$66.85

Fill in order form on reverse side



SPECIAL PHOTO WALL PLAQUE OFFER TO SIERRA READERS FROM COLOR KING, THE FILM LAB PROFESSIONAL PHOTOGRAPHERS USE.

Family Trips (See Base Camps and Hawaii for other trips with family rates.)

Wilderness Threshold

		Parents and one child	Each addl. child			
100	•Cramer Basin, Sawtooth Wilderness, Idaho	July 19-26	620	155	35	Ann & Larry Hildebrand
101	•Talchako Lodge and Tweedsmuir Park, British Columbia	July 23-30	650	185	35	Katie Hayhurst & Dennis Kuch
102	•Chamberlain Lakes, White Cloud Mountains, Idaho	August 2-9	620	155	35	Kathy & Jeff Parrish
103	•Donkey Lake, John Muir Wilderness, Sierra	August 4-12	525	125	35	Molly & Harry Reeves
104	•Donkey Lake, John Muir Wilderness, Sierra	August 14-21	525	125	35	Molly & Harry Reeves
105-E	•Navajoland Cultural Experience, Canyon de Chelly, Arizona	August 21-27	550	130	35	Myrna & Tom Frankel

Family Canoe

109-E	•Main Eel River, Northern California	June 29-July 5	590	150	35	Julianne & Bob Jones
110	•Green River, Canyonlands, Utah	August 6-14	795	205	35	Judy Hacker

Family Backpack

112	•Humphreys Basin, John Muir Wilderness, Sierra	July 13-20	330	90	35	Carol & Howard Dienger
113	•Volcanic Cascades, Three Sisters Wilderness, Oregon	July 16-23	300	80	35	Gary Tepfer
114	•Clark Mountain, Glacier Peak Wilderness, Washington	July 27-Aug. 3	425	105	35	Char & Dave Corkran
115	•Summit Lake Basin, Diamond-Thielsen Wilderness, Oregon	July 28-Aug. 3	295	75	35	Holly Jones
116	•Sandpiper Lake, John Muir Wilderness, Sierra	August 16-23	330	90	35	Dorothy & William McPherson

1980 Foreign Trips (Trip prices are subject to change prior to trip and do not include airfare.)

540	•French Polynesia/Cook Islands, South Pacific	March 7-29	1020	100*		Mary-Ed Bol
575	Walking Tour of Crete	May 31-June 14	1060	100*		Kathy & Robin Brooks
580	Trekking in Greece	June 16-July 4	1125	100*		John Ricker
585	•Walking in England's West Country	June 18-July 6	1125	100*		Mike Maule
605	Western Pyrenees, Spain	June 22-July 5	1075	100*		John Doering
620	France: Alps to the Mediterranean	July 1-16	995	100*		Lynne Simpson
600	•Climbing in Bolivia	July 7-28	1280	100*		Beverly Belanger & Les Wilson
610	•Kenya Highlands Adventure	July 9-August 2	2200	100*		Betty Osborn
650	•Southwest Greenland, Erik's Fjord	August 4-18	885	100*		Jim Watters
640	•Hut Hopping in the Austrian and Italian Alps	August 7-20	755	100*		Anneliese & Ken Lass
645	•West Germany: On the Weg through the Schwarzwald	August 10-28	1030	100*		Lynne McClellan-Loots
595	•Caucasus Mountains, U.S.S.R.	August 11-Sept. 4	1395	100*		Carl Denison
642	•Hiking through the Berner Oberland, Switzerland	August 22-29	645	100*		Anneliese & Ken Lass
657	•Kenya Cross-Country Horseback Safari	Aug. 30-Sept. 23	2450	100*		H. Stewart Kimball
660	•A Trek through the Last Shangri-la, Ladakh	September	1610	100*		Wayne R. Woodruff
670	Japan in Autumn	Sept. 13-Oct. 13	2000	100*		Mildred & Tony Look
680	•Balephi Khola Trek and Base Camp, Nepal	October	1175	100*		Ginger Harmon
685	•Ganesh Himal/Gurka Himal, Nepal	November 1-30	1175	100*		Bob Stout
690	Sahara Camel Caravan to the Hoggar Mountains, Algeria	November (3 weeks)	—	100*		Al Schmitz
695	•Sherpa Christmas, Nepal	Dec. 21-Jan. 4	500	100*		Peter Owens

*Per person deposit

!Group size of 10: \$2025 for group size of 15

1981 Foreign Trips (Unless specified, approximate prices to be announced Summer, 1980.)

700	Baja to the Tip, Mexico	Dec. 29-Jan. 9	910	100*		Betty Osborn
701	Baja from the Tip, Mexico	January 10-21	910	100*		c/o Betty Osborn
705	•Hiking in New Zealand	Jan. 30-Feb. 20		100*		Ann Dwyer
710	Kenya's Mountains to the Sea	Feb. (3 weeks)		100*		Betty Osborn
715	•Australia and Tasmania	Feb. 22-March 15		100*		Ann Dwyer
720	•Spring Trekking Adventure, Nepal	March (3 weeks)		100*		Al Schmitz
725	Israel: From Yesterday to Today	March/April		100*		Ray Des Camp & Lila Kramer
730	•Alps Ski Tour	April		100*		Wayne R. Woodruff
735	Cave Painting Expedition, Baja California	April 11-25		100*		Martin Friedman
740	Wales	June		100*		Lori & Chris Loosley
745	Hike and Bike in Ireland	June 24-July 7		100*		Frances & Patrick Colgan
750	•Kulu to Kashmir, India	June 28-July 25	990	100*		Peter Owens
755	Lakes and Savannas of Kenya	June-July (3 weeks)		100*		c/o Betty Osborn
760	•Tour du Mont Blanc, France	June-July (2 weeks)		100*		Patricia Hopson & Richard Williams
765	•Kashmir Mountain Trek	July		100*		Kathy & Robin Brooks
770	•Yugoslavia: Kamnik and Julian Alps	July		100*		Frederic Gooding, Jr.
775	East Africa Wildlife Safari, Kenya and Zambia	August 8-28		100*		c/o Betty Osborn

Trip Number	E = Educational outing • = Leader approval required	Date	Trip fee (Incl. Deposit)	Deposit	Leader
790	•Norway	August	100*		Jerry South
795	•India: The Nanda Devi Sanctuary	September	100*		Lynne & Doug McClellan
800	•An Outing to the Bernese Oberland, Switzerland	Sept. 27-Oct. 14	100*		Tony Look
805	•Nepal Fall Trekking Adventure	October	100*		c/o Doug McClellan
810	•Sikkim Trekking Adventure	November (3 weeks)	100*		Norton Hastings

*Per person deposit

Hawaii Trips (See Bicycle Trips for other Hawaii outings.)

26	Spring in Hawaii: Molokai and Lanai	March 28-April 5	420**	35	Fran & Gordon Peterson
120	•The Big Island, Hawaii Family Teenage Trip	July 26-Aug. 6	415***†	35	Joan & Bill Busby
121	•The Big Island Backpack, Hawaii	August 7-17	405**	35	Kent Erskine

**Trip prices do not include airfare.

†Children under 16 years, \$250.

Highlight Trips

30	Ventana Wilderness, Los Padres Forest, Big Sur, California	April 6-13	365	35	John Doering
125	Marble Mountains Wilderness, California	July 4-13	405	35	Laurie Williams
126	Humphreys Basin, Sierra	July 20-Aug. 1	530	70*	Stewart Kimball & Hugh Kimball
127	Ritter Range, Inyo Forest, Sierra	July 23-30	315	35	Serge Puchert
128	Big Five Lakes, Sequoia Park, Sierra	July 28-Aug. 7	450	35	Bert Gibbs
129	Jasper/Mt. Robson Parks, Alberta, Canada	August 3-15	510	70*	Bill Huntley
130	High Uintas, Ashley Forest, Utah	August 12-21	440	35	Jerry Clegg & Jack Gunn
131	Ruby Mountains, Humboldt Forest, Nevada	August 16-23	340	35	David Horsley & Chuck Schultz
132	Western Slope of the Tetons, Targhee Forest, Wyoming	August 18-27	430	35	Kathy Jones
133	Matterhorn Canyon, Sierra	August 23-30	285	35	Diane & Al Fritz
134	Anza-Borrego Desert State Park, California	Dec. 28-Jan. 3	255	35	Blaine LeCheminant

*Per person deposit

Service Trips

Clean-Up Projects

215	•Yosemite Park Roving Clean-Up Sierra	July 20-30	65	35	Tim Wernette
216	•Long Trail, Green Mountain Forest, Vermont	July 27-Aug. 2	65	35	Kevin Cresci

Trail Maintenance Projects

46	•Superstition Wilderness, Tonto Forest, Arizona	March 30-April 5	65	35	Rod Ricker
217	•Guanella Pass, Colorado Front Range, Colorado	July 6-16	65	35	Jim Bock
218	•Bridge Creek, Marble Mountain Wilderness, California	July 7-17	65	35	Roy Bergstrom
219	•Caribou Mountain Lake, Idaho	July 8-18	65	35	Tim Cronister
220	•High Uintas Primitive Area, Wasatch/Ashley Forests, Utah	July 13-23	65	35	Bill Bankston
221	•Sequoia/Kings Canyon Trail Rehabilitation, Sierra	July 20-30	65	35	Brook Milligan
222	•Clear Lake, Marble Mountain Wilderness, California	July 21-31	65	35	Dave Bachman
223	•Renshaw Lake, Lewis and Clark Forest, Montana	July 21-31	65	35	Randy Klein
224	•Preston Peak, Klamath Forest, California	August 4-14	65	35	Bruce Horn
225	•McGee Canyon, John Muir Wilderness, Sierra	August 6-16	65	35	Bryan Wilson
226	•Shenandoah Park, Virginia	August 17-23	65	35	Alan Goodman
227	•Hilton Lakes, Inyo Forest, Sierra	August 23-Sept. 2	65	35	David Simon
228	•Margaret Lakes/Goodale Pass, John Muir Wilderness, Sierra	August 28-Sept. 7	65	35	Keith Proctor

Special Projects

229	•Fitzpatrick Wilderness Restoration, Wind River Range, Wyoming	July 26-Aug. 4	65	35	John Stansfield
230	•Eagle Cap Wilderness Airplane Clean-Up, Oregon	August 5-15	65	35	Brook Milligan
231	•New Denver Glacier Special Trail Project, Valhalla Range, British Columbia	August 17-27	65	35	Lawson Legate
232	•Cottonwood Lakes Clean-Up and Trail Maintenance, John Muir Wilderness, Sierra	August 18-28	65	35	Tim Wernette
233	•Lake Chelan Proposed Scenic Area Revegetation Project, Wenatchee Forest, Washington	August 18-28	65	35	Bill Bankston

Ski Trips

278	Superior-Quetico Ski and Snowshoe, Minnesota/Ontario	Feb. 24-Mar. 1, 1980	240	35	Stu Duncanson
282	•Arizona Ski Touring, Mormon Lake, Arizona	March 9-15, 1980	180	35	John Ricker
283	•Maine Backcountry Ski/Snowshoe Tour	January 4-10, 1981	155	35	Fred Anders
284	Ski Touring Clinic, Steamboat Springs, Colorado	January, 1981	†	35	Sven Wiik
285	•Adirondack Ski Touring, New York	January, 1981	†	35	Walter Blank
286	Superior-Quetico Ski and Snowshoe, Minnesota/Ontario	February, 1981	†	35	Stu Duncanson

†1981 Ski Trip prices available Summer, 1980.

Trip Number	E = Educational outing • = Leader approval required	Date	Trip fee (incl. Deposit)	Deposit	Leader
-------------	--	------	-----------------------------	---------	--------

Water Trips (See Alaska and Family Canoe Trips for other Water outings.)

Raft Trips

29	Grand Canyon Oar Trip, Arizona	March 31-April 13	950	70*	Kurt Menning
245	Rogue River, Oregon	June 16-20	355	35	Herb Graybeal
246	Rogue River, Oregon	July 7-11	355	35	Wheaton Smith
247	Rogue River, Oregon	July 21-25	355	35	Bill Bricca
248	Kobuk River Raft and Hike, Brooks Range, Alaska	July 21-31	1115	70*	Ginger Harmon
249	Main Salmon Dory Trip, River of No Return, Idaho	July 30-Aug. 6	645	70*	Jeanne Watkins
250	Grand Canyon Oar Trip, Arizona	August 1-12	890	70*	Ruth Dyche
300	Tatshenshini River, Alaska	August 4-13	1065	70*	Rolf Godon
251-E	Hell's Canyon Paddle Trip, Snake River, Idaho	August 7-12	485	35	Gary Dillon
252	Rogue River, Oregon	August 25-29	355	35	Grace Hansen
253	Grand Canyon Oar Trip, Arizona	Sept. 22-Oct. 3	890	70*	Martin Friedman
254	Grand Canyon Oar Trip, Arizona	October 9-22	985	70*	Dawn Cope

*Per person deposit

Sportyak Trips

255-E	San Juan River, Utah	June 21-26	505	70*	Chuck Fisk
256-E	Green River, Utah	July 10-17	655	70*	Gary Larsen
257-E	Green River, Utah	August 15-23	715	70*	Mary Miles

*Per person deposit

Canoe Trips

31	•Dismal Swamp, Virginia	April 13-19	165	35	Herb Schwartz
32	•Okefenokee Swamp, Georgia	April 28-May 3	165	35	Lincoln Roberts
33	•Salt River, Arizona	May 25-30	180	35	John Ricker
260-E	•John Day River Naturalist, Oregon	May 31-June 7	255	35	Judy Hacker
261-E	•John Day River Singles, Oregon	June 7-14	255	35	Pat Dell'Era
262	•Main Eel River Adult, Northern California	June 15-21	195	35	Larry Busby
263	•Southern Appalachian White Water Canoe Base Camp, NC/SC/GA	June 21-28	225	35	Barbara Osgood
264	•Quetico-Superior Leisure, Minnesota/Ontario	June 29-July 12	360	35	Stu Duncanson
265	•Hunlin Falls/Panorama Ridge Canoe/Backpack, Tweedsmuir Park, British Columbia	July 8-19	375	35	Katie Hayhurst & Dennis Kuch
266-E	•Rogue River Naturalist, Oregon	July 30-Aug. 5	230	35	Ann Dwyer
267	•Kejimikujik Park, Nova Scotia	August 3-11	270	35	Connie Thomas
268	•Rogue River Backpacking and Canoeing, Oregon	August 9-17	265	35	Ann Dwyer
269	•Mississippi River, Wisconsin/Iowa/Illinois	August 17-24	195	35	Jim Kirk
270-E	•Green River, Canyonlands, Utah	August 18-26	315	35	Carol & Howard Dienger

Boat Trips

430	Whale-Watching Leisure, West Coast of Baja, Mexico	February 16-23	720	70*	Steve Anderson
431	River of Ruins (Rio Usumacinta) by Raft, Mexico	February 20-29	895	70*	John Garcia
432	Sea of Cortez Leisure, Mexico	Mar. 29-April 5	730	70*	Lynn Dyche
436	Sea of Cortez Leisure, Mexico	November 22-29	730	78*	c/o Ruth Dyche

*Per person deposit

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:

1/80

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.

Oaklandtopia

A Cheery History of the Future

RICHARD ALBERT, JR.

IT'S HARD to believe now, looking around at the general prosperity and happiness, that in 1979—only 30 years ago—everyone felt that Oakland, like all California cities, was doomed. What came to be known as the "taxpayer revolution," the 1978 passage of the Jarvis-Gann Amendment to the California Constitution, which limited the property tax rate and drastically cut back government spending, seems as remote to us in the 21st century as America's revolution did to the average Oaklander in 1978. Yet it was the response to the reduced government funding that led to the current prosperity.

Those of us who lived through the turbulent years of budget cutting and service slashing remember the turmoil vividly; the elimination first of crusty bureau-

cratic waste, then of "luxury" services and finally of essential services. Mass hysteria and depression alternated with hard-nosed decision-making on how to do as much as possible with the limited funds—the city gave up enforcing the countless federal "red tape" regulations early on. A few of us felt that people would discover they really didn't need a central bureaucracy, that people could take care of themselves. But we didn't know if the discovery would lead to action; we just hoped.

The change started with street maintenance. With cleanup crews cut by 50%, street litter increased rapidly. Citizens grew irate: "Why can't the city keep its streets clean?" was a constant chorus at City Hall. "You should know; you probably voted for 'tax relief'" was the in-

evitable reply. To this day no one knows whether it was a city staffer or a citizen who first said, "Why don't we do it ourselves?" But once the question was asked, the floodgates were open.

At first the cleanup was random; those citizens who could tolerate the mess least picked it up first, but soon block parties began to organize. Neighbors who hadn't said more than hello to each other for ten years were airing common gripes as they pushed brooms down their streets.

This outbreak of civic pride was infectious. A street-cleanup group in West Oakland—an area usually ignored by city officials—was the first to challenge the city publicly, in a paid advertisement in the local paper: "We have the cleanest block in the city." It was the last paid ad

Illustrations by Steve Johnson





of its type in the paper: Outcomes of "clean-offs" became public record within weeks, listed with the regularity of baseball scores.

All the stops were out now. Teenagers, formerly sources of a disproportionate amount of street trash, were leading the cleanup campaigns in many areas; schools competed. By 1981, when the city discontinued street sweeping altogether, Oakland's streets had never been cleaner.

Impressive as the neighborhood cleanup campaign was, the local safety program was even more impressive. Oakland's police department, although efficient, had always been understaffed; cutbacks made matters worse. The crime rate rose—mostly juvenile delinquency such as vandalism, harassment and

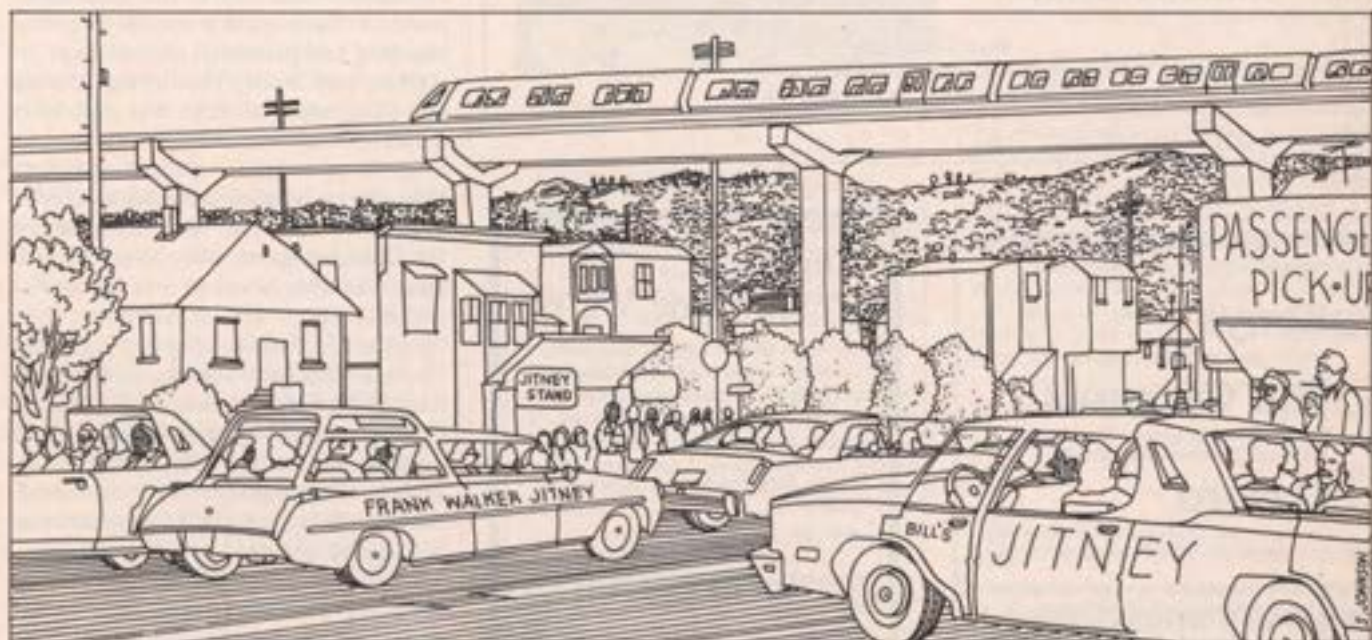
break-ins. The newly organized block groups hit on the idea of setting up "street watch" schedules citywide to police their own blocks. Parents who had watched their blocks informally as child monitors or block parents found that daytime official street monitoring was no different. And by night the streets were brightly lit; where city lights had dimmed or failed because of lack of maintenance funds, the block groups found enough money to buy a few new unbreakable spotlights, which illuminated many an Oakland street to a level never known prior to the taxpayer revolution.

It worked. Just the knowledge of a watching eye ready to summon a block's worth of adults deterred most minor crime. And for the serious offenses when professional police service really was

needed, the constant local vigilance allowed a police force no longer preoccupied by minor calls to respond faster.

Community gardens came next. As government at all levels faltered and inflation continued unabated, the poor, as always, were hardest hit; and Oakland had more than its share of urban poor, especially as already high unemployment rates crept higher. When the food-stamp program was cut back 50%, thousands faced a serious crisis. It was then the city became aware of a very precious resource that previously had been taken for granted—space.

Oakland never had reached the density of nearby San Francisco or the older eastern cities, and—also unlike many eastern cities—the poorer areas were not the most heavily populated. So family gar-



At the top of the world.

Alone.

Naomi Uemura
and
Silva Compass.



On April 29, 1978, Naomi Uemura became the first person to go by surface route to the North Pole, alone. His compass for the 57-day solitary trek over 800 km (500 mi) of



frozen Arctic wastes: A Silva. Around the world, Silva is the compass most highly regarded for accuracy and dependability. This is why Uemura chose it. And why you should too.

Silva Company

a division of Johnson & Associates
2466 North State Road 39, LaPorte, Indiana 46350

dens multiplied until nearly every backyard had a plot, a situation that continues and gives the city its nickname, "Garden City of the West."

But while backyard plots could provide adequate vegetables and fruits, families usually lacked the space to also generate high-protein food sources. Thus the community garden.

First planted in the vacant lots common to every part of Oakland, community gardens now cover sites of former parking lots and unnecessarily wide streets. Oakland leads the nation in urban bean production. Soy, fava, garbanzo, pinto, pea: all thrive in the mild California climate that was meant by God to grow food, not asphalt. But let us recall the astonishing rate at which the community gardens grew: In 1988, only ten years after the taxpayer revolution, Oakland produced 60% as much proteinaceous legumes as it grows today.

Within a few years certain districts were becoming known for specialty crops. Fruitvale, where people replanted the fruit trees for which the area was known in the nineteenth century, was once again a center for peaches, cherries and other fruits—Peralta Creek gave the area just enough extra water to support them. East Oakland became famous for its melons, but the West Oakland soybean farm was the real turning point. Within three years the farm, in conjunction with a cooperative tofu plant housed in a former garage, was turning out enough high protein to support the entire district.

The community garden defined community limits and increased community spirit more than any of the other early projects. Each garden required special planning and personnel organization, as well as hard work. The drying, storing and distribution of crops was especially tedious. Small huts used as combination office/community gathering-point/bean-storage depots were built all over town, the "bean hut" so much a part of the Oakland scene today. Surplus produce was distributed to less successful communities—first at random, then through the long-established Berkeley Co-op's Oakland stores, and finally through the Oakland Community Garden Co-op, established with much aid and guidance from the Berkeley Co-op. Today "The Garden," as it is called, provides fully 80% of all food consumed in Oakland homes.

The city was taking control of itself—grassroots organization was real—and the people were learning an

University of California Extension Foreign Study for Adults, Summer 1980

Kenya

Wildlife, peoples, history. Aug. 4-23.

The Caucasus

Culture, art, contemporary affairs. Georgia, Azerbaijan, Armenia. June 17-July 8.

Oxford

Darwin, English landscape & 26 more courses. Two 3-week sessions: July 1-Aug. 13.

Send this coupon with name and address to:
International Dept. C-16, UC Extension,
2223 Fulton St., Berkeley, CA 94720.

English Countryside Walks

Through quaint villages and lovely scenery. Along mediaeval footpaths, prehistoric and Roman tracks... 17-day and 9-day tours...Relaxed pace...Small parties...Country inns...

Please send me further information:

Name

Address

Country Walking Holidays

256 Firestone Drive, Walnut Creek, CA 94598



important fact that Americans knew in 1776 but had forgotten in the intervening two centuries: You don't steal from the cookie jar when you and your neighbor own the kitchen.

The First Pan-Oakland Intercommunity Conference was held in 1984, only six years after the taxpayer revolution. What an amazing six years! That first meeting officially sanctioned what had been going on informally before: The people of Oakland had effectively formed themselves into communities, each with a council and each further divided into block groups—rarely only one block but never more than three or four.

The plans and programs discussed at this historic town meeting—the first time most Oakland citizens ever participated in shaping their own urban future—were legion. All they needed was a way to finance them, and one of the hottest topics was how to raise money. Out of this debate arose the Oakland Transportation Company.

Transportation in Oakland was stalled in 1984. The Bay Area Rapid Transit (BART) system had never served Oakland much, and the price increases and service cutbacks of 1981 made matters worse. The Alameda County Transit bus system also doubled prices and cut back service in 1981, and at a time when *per capita* car ownership was finally decreasing in response to runaway fuel prices. Some jitney service, the privately owned mass transportation so common in San Francisco's Mission District, had sprung up; but such local transportation alternatives were still on a very small scale in Oakland.

Why your windows are the greatest cause of heat loss in your home. And what you can do about it.

By David May, President,
Appropriate Technology Corp.

Your home is well insulated, you've installed storm windows and weatherstripped everywhere you feel the slightest draft. But is your home really protected against major heat loss?

Not likely. Even the best winterized houses frequently lose more than half their heat through windows and sliding glass doors. So your energy dollars are pouring out of your unprotected windowglass every winter day.

While a well-insulated wall will resist heat escape with a high R-value, glass by itself offers almost no resistance. A single glazed window has a total R-value of only R 0.89. Double-pane, only R 1.8.



New kind of thermal shade is 4 times more effective than storm windows

"Toe test" offers proof

Remember the last time you stood barefoot next to a frosty window on a cold winter morning? Even with the window closed tight, you feel an icy cold floor chilling your toes. (Warm room air chilled by the frigid glass falls downward—which is why warm air vents are usually located under windows.)

Of course, south-facing windows can provide you with a real advantage—by transmitting "free heat" from the sun. But how do you keep this valuable solar heat from escaping at night—when about 75% of heat loss occurs?

Cuts heat loss up to 79%

A new insulating window shade we manufacture in Brattleboro, Vermont is far more effective in blocking heat loss or gain through windowglass than double- or triple-glazing,

ordinary blinds or insulated drapes. They are 4 times more effective than storm windows.

WINDOW QUILT[™] thermal shades insulate up to R 4.25 for single-paned and R 5.15 for double-paned windows. Thus Window Quilt can reduce heat loss through windowglass by as much as 79% in your home.

These thermal shades let you open your home to the free warmth of the winter sun, then effectively block heat loss through your windows at night. In the summer, they protect your home from the sun's intense rays, and save on air conditioning.

In snow country, with double glazing one square foot of Window Quilt can save one gallon of oil per year. Whatever your fuel, your savings will be substantial. Window Quilts will probably pay for themselves well within 5 years.

Amazing 5-layer insulator

At the heart of this super-efficient shade is an aluminized plastic film that acts as an effective heat reflector and vapor barrier. This thin sheet is surrounded by two layers of insulating fiberfill, covered by a durable neutral-color fabric. All 5 layers are ultrasonically welded in an attractive quilt pattern.

Another key to Window Quilt's effectiveness is an exclusive 4-way seal that stops air flow. These thermal shades are track-mounted on your windows, and form a pressure seal at top and bottom.

Window Quilt is the most effective window insulator you can buy. And we can prove it.

Send for literature and sample

Let Window Quilt stop the Great Heat Escape in your house this winter. Send \$2.00 for a detailed literature portfolio with full supporting data, an actual Window Quilt sample, and the names of your nearby dealers.

I want the full story on these amazing energy-saving thermal shades. Here's \$2—send your detailed literature portfolio, including a chart to figure my savings, and WINDOW QUILT sample

Send names of Window Quilt dealers near me, free.

Name _____

Address _____

Zip _____

Appropriate Technology Corp.

1901 Green Street Brattleboro, VT 05301

Dealer Inquiries Invited

stay warm this winter

At last a genuine energy saver! America has rediscovered the European down comforter. We call it a duvet. Covered in finest silk-like cotton cambric, and plump with the purest down to keep you warm on the coldest night.

Cover it with one of our washable sheetcases and that's all the bedding you'll need. With no heavy blankets or sheets - bedmaking's a breeze!

Turn down the thermostat and snuggle up with duvet.

Send for our information brochure.



DUVET by Lindisfarne

708 Live Oak Drive • McLean, VA 22101
703 790-9275

FIRE POWER FOR ONLY 19 OUNCES



Burner, pump, windscreen & pint fuel bottle weigh 19 oz.

Boils 24 qts. of water with 1 pt. of white gas

Boils 1 qt. of water in 3 1/2 min.

Burns white gas, auto gas, kerosene, diesel & more

Works well in wind, cold, and at high altitude.

See your dealer or write MSR for free catalog & list of dealers.

Mountain Safety Research

Dept. SC 020
631 South 96th St.
Seattle, WA 98108



But raw materials for a new system were available in plenty; Oakland had more than its share of unemployed mechanics and bus drivers, not to mention the large American cars abandoned everywhere by their owners when gas prices broke the \$3-per-gallon mark. Conversion of the big cars to the now-famous "Oakland jitney" was almost inevitable. Oakland now exports hundreds of these recycled American monsters yearly; with their ten open seats and small electric motor, they are the perfect answer to city public transportation and supply can never catch up with demand. An unexpected environmental side benefit has arisen: The jitney factory has now converted most of the large cars abandoned between Eureka and Salinas; in a few more years, the abandoned cars that have been a standard part of the California roadside scene will be gone.

Housing restoration was another outcome of the First Conference. In 1984 Oakland had the largest number of unrestored Victorian houses west of St. Louis. Most of these were in or near manufacturing districts, and the hazards of investing energy and money in a house that might be condemned and demolished for a factory site had prevented a movement like the ones that transformed Victorians into gold mines in nearby San Francisco and Alameda. By adopting a housing preservation ordinance, the First Conference guaranteed the continued existence of any restored house. As a sign of how fast the power shifted from the traditional central government to the conference, not one Victorian renovated since 1984 has been torn down to make way for factories or for street widening; and several hundred formerly elegant houses have been restored.

The fish farm was another stroke of genius from the First Conference. This high-intensity, mixed aquaculture system combines algae-eating fish and predators that are fed local cockroaches. The system produces enormous quantities of fish from ponds dug in formerly trash-littered vacant lots scattered throughout East Oakland. The fish farm, along with locally raised chickens, goats, pigs and dairy cattle, helps Oakland toward self-sufficiency in nonvegetable protein (and most Oaklanders are still omnivorous). Today Oakland is self-sufficient in production of eggs, milk, cheese, chickens, fish and pork; only beef must still be imported.

Equally exciting was the establishment of a wine industry. What a celebration when the first vintage of Rockridge

Galapagos Islands Expeditions

Combine adventure, discovery, learning and vacation on 20-day expeditions to Darwin's enchanted Isles.

Libertarily explore all of the major islands in the archipelago, including Tower, Hood, Fernandina, and James, traveling and living aboard motor-sailing yachts.

Expert leadership, small groups, superb wildlife photography.

Departures: January, April, June, July, August, and November



Nature Expeditions International

209 College Ave. • Dept. NE • Palo Alto, CA 94306 • (415) 328-6377

CUDDLE UP

with our FREE CATALOG of
European-style DOWN QUILTS

Cotton or cotton blend fabrics, filled with your choice of duck or goose down. Decorator sheetcase covers and puffy pillows, too. Our quality is guaranteed. And our prices are cozily low. Send us your name and address and we'll rush our catalog.

WARM THINGS

180 Paul Dr. — Dept. SC | San Rafael, CA 94901
415/453-4262 — 48 HR SERVICE — MC & SA ACCEPTED



College of the Atlantic

College of the Atlantic offers the Bachelor of Arts degree in Human Ecology — the complex study of the relationships between man and the natural and social environments. Students design their own programs of study which incorporate three resource areas: environmental sciences, environmental design, and human studies. For more information write: Admissions Office, Box 5, Bar Harbor, ME 04609.



Everything you need to produce your own nature prints using sun-sensitive paper. Develops in water. Instructions are simple, easily understood by children. A great gift.

SOLARGRAPHICS (25 5 1/3" x 7 1/2" sheets) \$6 ppd
Refills (15 sheets) 2.95
California orders add 6% tax

SOLARGRAPHICS

P.O. Box 7091 SC, Berkeley CA 94707
dealer enquiries invited



Rock Music

For the ears and the eyes: the sights and sounds of natural places, naturally pleasing.

This is wilderness—the home of wildlife and the barometer of this planet's ecological balance.

Wilderness is one of the primary reasons for the Sierra Club. And the members of the Sierra Club are the reason behind 87 years of effective action to preserve our natural heritage.

You can help, too. Add your voice on behalf of all that is defenseless and irreplaceable—join the Sierra Club and help preserve the sounds of wilderness forever.



Sierra Club

A way for wilderness to be heard

MEMBERSHIP FORM

YES, I want to join! Please enter a membership in the category checked below:

New Member Name: _____

Address _____

Zip _____

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

Donor Name: _____

Address _____

Zip _____

GIFT MEMBERSHIPS 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.

MEMBERSHIP CATEGORIES

	Individual			
	Dues	Joint	LIFE MEMBERSHIP	
Regular	<input type="checkbox"/> \$ 25	<input type="checkbox"/> \$ 29	Per Person	<input type="checkbox"/> \$750
Supporting	<input type="checkbox"/> 40	<input type="checkbox"/> 44	Spouse of Life Member	<input type="checkbox"/> 12
Contributing	<input type="checkbox"/> 100	<input type="checkbox"/> 104	(annual dues)	
Senior	<input type="checkbox"/> 12	<input type="checkbox"/> 16		
Student	<input type="checkbox"/> 12	<input type="checkbox"/> 16		
Junior	<input type="checkbox"/> 12	—		

All dues include subscription to *Sierra* (3.00) and chapter publications (1.00).

Mail to:

Sierra Club

DEPARTMENT 5-002
P.O. BOX 7959, RINCON ANNEX
SAN FRANCISCO, CA 94120

MEMBERSHIP FORM

YES, I want to join! Please enter a membership in the category checked below:

New Member Name: _____

Address _____

Zip _____

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

Donor Name: _____

Address _____

Zip _____

GIFT MEMBERSHIPS 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.

MEMBERSHIP CATEGORIES

	Individual			
	Dues	Joint	LIFE MEMBERSHIP	
Regular	<input type="checkbox"/> \$ 25	<input type="checkbox"/> \$ 29	Per Person	<input type="checkbox"/> \$750
Supporting	<input type="checkbox"/> 40	<input type="checkbox"/> 44	Spouse of Life Member	<input type="checkbox"/> 12
Contributing	<input type="checkbox"/> 100	<input type="checkbox"/> 104	(annual dues)	
Senior	<input type="checkbox"/> 12	<input type="checkbox"/> 16		
Student	<input type="checkbox"/> 12	<input type="checkbox"/> 16		
Junior	<input type="checkbox"/> 12	—		

All dues include subscription to *Sierra* (3.00) and chapter publications (1.00).

Mail to:

Sierra Club

DEPARTMENT 5-002
P.O. BOX 7959, RINCON ANNEX
SAN FRANCISCO, CA 94120

Riesling came in—1995 was a very good year. Since then we've had Lakeshore Gewurztraminer, Longridge Zinfandel and many other wines. The quality has been as good as one would expect from grapes grown in a perfect climate and processed by loving winemakers.

Sewage disposal was another area of success. Once again the old system sowed the seeds of its own death. In 1977 the city installed the traditional gravity-operated system—the sewage disposal system unchanged in its operating principle since Roman times—that cost close to \$5000 per house. That sewer assessment was the last of its kind. Self-contained disposal systems could be constructed at that time for less than \$5000, and the only by-product, compost, is a valuable resource. When the sewer assessment for another district was \$7000 per house (and natural-gas prices had risen even faster), it was all over for traditional sewage disposal. The First Conference put an initiative on the ballot to commit the entire Oakland sewer-service revenue (about \$1 million per year) to subsidizing the new, individual waste systems rather than sewer repair. That started the move to self-contained, privately owned waste systems, and today 40% of Oakland's dwellings have them. The remaining 60% of the dwelling units are using those sewers that are still in good shape. With a 50- to 60-year lifespan for the average sewer, the conversion rate to self-contained systems is actually staying constant, and Oakland is gaining valuable resources, not to mention using much less water in the disposal process than before.

Education is another area of success. The public school system was on the verge of collapse in 1984. Maintenance of the school buildings went downhill sharply after 1980, and the children weren't learning much. Yet the school budget, cut in half by the taxpayer revolution, was still massive. The First Conference voted a resolution urging the existing school board to disband; when it did, the community councils dispersed the school funds to provide genuinely local schooling. Houses became schools, and those parents who were teachers—there were some in each community—taught the youths. The success of the new neighborhood school system was demonstrated at this year's Pan-Oakland Conference: Oakland children's scores on standardized tests are 35% higher than in 1978, and the total school budget in real dollars is less than half what it was in 1977-78, with no massive physical struc-



**Enjoy
Sleeping Comfort
Anywhere...**



**the
self-INFLATING · INSULATING
mattresses**

NOW IN 3 SIZES. Lightweight and compact. Therm-a-Rest gives you more sleeping comfort than other mattresses or pads. Just open the valve.
3/4 length: 19"x47"x1 1/2", wt. 1 1/2 lbs.
Full length mattress and Sportseat available.
Sold coast to coast.

**THERM-A-REST/Cascade Designs, Inc. d. S.
568 1st Avenue S., Seattle, WA 98104**

Alpenlite® Super Tour



**Take it ski touring.
Another quality pack
by
Alpenlite®**

39 West Main Street
Ventura, California 93001
(805) 653-0431

FRED

Scientific Radiation Monitor

FRED, the Family Radiation Evaluation Device, is the first gamma radiation monitoring device for home or office use. Whether you are concerned with emissions from mining, nuclear reactors, radioactive wastes, or building materials, FRED will prove useful.

Scientific. The design concept and proposed procedures of FRED have been endorsed by MHB Technical Associates, Consultants on Energy and the Environment.

Safe. FRED does not utilize high voltage.

Accurate. FRED measures from less than 1mR to over 10⁶R.

Affordable. FRED units are \$19.95 each.

Easy to use. Simply remove the chemical cartridge from the lead shield and insert it in the display unit. After a chosen period of time, anywhere from 1 month to a year, return the cartridge to our lab with \$5.00 for a report and a new cartridge.

Lincoln Technology
10 Carnelian Way
San Francisco, CA 94131

Please send me _____ FRED units @ \$19.95 each prepaid. Add \$1.50 for postage and handling. California residents add 6% sales tax.

I enclose \$_____ total in check or money order.

Name _____

Address _____

City _____ State _____ Zip _____





alum-a-Shoe™ by tubbs



At last — A snowshoe that meets the needs and desires of snowshoers everywhere.

- one piece aircraft aluminum I-beam construction
- 4 oz. lighter per shoe than competitor's model
- scientifically engineered stainless steel crampons provide unparalleled traction — uphill — downhill or on traverse
- superior pivot plate with aircraft aluminum rod and maintenance-free nylon bearings
- Hypalon® & Hytrel® used for maintenance-free flotation and traction

Tested and Selected for use by the 1979 Mt. Everest Expedition.

Seconds of snowshoe furniture and some traditional snowshoes available at factory store in Forestdale, Vermont.

© Registered trademark of E. J. Duggan

For more information write

vermont tubbs, inc.

FORESTDALE • VERMONT • 05745 OR

vermont tubbs, inc.

P.O. BOX 98, ASHFORD, CONN. 06278

BEE SEAL PLUS



BOOT PROTECTOR

BEE SEAL PLUS is presoftened beeswax — a superior waterproofing material for boots which maintains flexibility at low temperatures, adheres well and resists cracking under continual flexing of the leather. BEE SEAL PLUS is a fine conditioner which allows the leather to breathe naturally and lubricates without softening. BEE SEAL PLUS will not attack or degrade any materials used in boot construction and may be used effectively on all types of leather.

Dealer inquiries invited
Distributed by

Sierrawest

6 East Tansill Street, Santa Barbara, California 93101

where college is more than the classroom

All World College West, in the San Francisco Bay Area, the 4-year liberal arts program is interdisciplinary and experience-based. It includes foreign study and building a campus specializing appropriate technology. BA degree in Resource Management, Human Services or Interpersonal Studies. Call office: (415) 332-9412 or 3030 Bee 3032-4. See World College West.

world college west

COME,
EXPLORE
and
TREK
with us



Request a brochure:

17002 Cotter Pl.
Encino, CA 91436

We have explorations, treks, trail maps, guidebooks, road maps, & the famous 'leg pouch' — best way to carry money.

tures to maintain or high administrative salaries to pay.

Abandoning traditional schools left Oakland with huge, unused buildings scattered throughout the city, many in poor shape, admittedly. How to use them was also left to the communities, and most councils came to the same conclusion: create neighborhood centers. Local architects, many of them unemployed or underemployed, devoted endless hours to modifying the buildings for their new uses, particularly for trying out various energy-efficient ideas—most of the local innovations in insulation design, solar-heat systems and windmills were developed on these former school buildings. The structures have come full circle now; some of the communities again use them for classes. With their bright colors and the wide age span of people using them, the buildings are a far cry from the dull-gray "kids only" isolation wards of past years.

Health care was another sick case in 1984. The city had no public health service then; federal funding was cut in 1980, and the service went rapidly downhill after that. By 1990 there was a real crisis.

Health service still needs improvement, though the establishment of neighborhood health-care centers, staffed primarily by paramedics and by at least one doctor 24 hours a day, has helped immensely. Also, the focus on common health problems and on preventive maintenance—pregnancy and family planning, drug- and alcohol-related disorders—has helped cut down expenses. Oaklanders are healthier than ever at less total expense.

For years Oaklanders and all Americans were subjected to a "you can't do it yourself" propaganda barrage—from professionals, from government bureaucrats, from the media. "Leave it to the experts, it's too complex for you" was an American theme from 1945 to 1980. And the campaign was remarkably effective: This nation, once known for individual initiative, was converted in one generation to a nation of dependents; self-sufficiency was at a low ebb. Now the people know they can do it themselves—and they feel better than ever before about their lives and their environment. Maybe the taxpayer revolution of 1978 was the best thing that could have happened to Oakland—and the United States. □

Richard Albert, Jr., is a free-lance writer in San Francisco. He was formerly with Oakland's Office of Public Works.

Energy 1979

Continued from page 13

baum (D-Ohio) on conservation and renewables. On the House side, Morris Udall (D-Arizona), Timothy Wirth (D-Colorado) and Don Clausen (R-California) led the fight against the arbitrary version of the EMB, while Richard Ottinger (D-New York) took the lead on a strong conservation policy. But they were consistently beaten down by the synfuel forces led by Senators Henry Jackson (D-Washington) and Bennett Johnston (D-Louisiana) and Majority Leader Robert Byrd (D-West Virginia), while on the House side John Dingell (D-Michigan) led the charge for massive waivers of environmental laws by the EMB.

• Environmentalists were united and involved as never before on energy issues. And, in forming the Energy Coalition, they eventually earned the support of a broad array of citizen, consumer, minority and low-income groups as well. The Administration, unfortunately, managed to neutralize most of organized-labor pro-environment voices; only the United Steelworkers consistently stuck with the environmental movement, while the AFL-CIO worked for the Administration positions. But environmentalists also enjoyed strong support from state and local governments, and on many occasions even from key business groups.

So what is the explanation for this first-round debacle? Why did Congress adopt a set of solutions that almost certainly will solve nothing? Why, in particular, did the Carter Administration rush to embrace these non-solutions, abandoning, in the process, significant parts of its original constituency?

Almost all those who embraced the synfuels program or the EMB did so because they liked the symbolism involved, not because they actually believed the programs would succeed. The White House documents used by the President before his July 15 speech to the nation cite only one reason for a big synfuels program—Congress is likely to do it anyway, so the Administration should get ahead of them and claim credit for the victory. The White House consistently supported bills providing for waiver of environmental laws while insisting it does not want such waivers. Supporting something that looks tough, the Administration has claimed credit for "victories." In the Senate debate on synthetic fuels, the need to "send a message" to

the Iranians was prominent in many senators' speeches—even though it is abundantly clear that the synfuels program will do nothing to reduce oil imports for at least five years.

In the end, then, Congress and the President decided that synthetic fuels plants and a powerful EMB could be convincingly packaged as a solution to the energy problem, and that conservation and renewable alternatives linked with immediate steps to cut gasoline use could not. The question now is how long this triumph of the politics of packaging will withstand public scrutiny and the rush of events.

If one were to view this history of energy legislation in the first session of the current Congress as Act I of a play, it would be tempting to tell the audience, "It's time for the rotten tomatoes." Jimmy Carter aspired to make the energy drama a morality play in which good triumphs and evil is defeated. Unfortunately the supporting cast, drawn from the Senate and the House, were far more comfortable with the type of social satire in which hypocrisy and bombast triumph over common sense.

The media summed up Carter's performance variously as "the moral equivalent of cornmeal mush," "going to war with a popgun," and "shooting ourselves in the foot." But it appears the President and Congress are willing to ignore their critics in the media, as they've ignored energy analyses. They will not, however, ignore voters—not if those voters confront them and demand a more effective national energy policy.

The 1980 election campaigns must be the vehicle for this confrontation. The President has seen staff memos warning him that his synthetic-fuels option is a sham. He should now see a dozen or more citizens at each appearance he makes in New Hampshire, questioning his energy policy. The senators who voted to support the Energy Committee version of the Energy Mobilization Board were told by state and local governments just how dangerous that proposal was. They now should get replies to their fund appeals refusing to give to those who supported this version of the EMB. The President and his campaign opponents have heard the anguish of national environmental leaders who opposed the EMB and synthetic fuels. They should now find hundreds of grass-roots conservationists at precinct caucuses—running for delegate seats at the national nominating conventions of both parties.

Politicians have thought of the envi-

ronment as trees, waterways and endangered species—none of which register to vote. In 1980 we must force them to think of the environment as also comprising thousands and hundreds of thousands of determined voters.

Environmentalists flooded the President and Congress with letters on the energy issues. This is a start. But many politicians do not believe that environmentalists will follow through. Environmentalists too often have shied away from direct personal involvement in the political process. It is time for face-to-face mobilization. Conservationists must start meeting with their elected officials and candidates to tell them what they, as voters, expect and want. We need to stand up at rallies and ask, politely but persistently, why Congress "solved" the energy crisis by putting most of the money into the least promising and most expensive technologies, the synthetic fuels. We need to appear at precinct caucuses where the presidential candidates will be selected, asking questions, demanding answers. And we need to become delegates to the Republican and Democratic conventions.

If, in the next six months, every Sierra Club member would just once personally attend and participate in a political event, it would make a world of difference. Politicians will be willing to endure the "slings and arrows" of outraged critics, but they will pale before the boos of crowds of voters. The energy experts have given Congress and the President a decent script to solve our energy dilemma; it is up to us in the audience to see that they play it straight. □

Gene Coan and Carl Pope are members of the Sierra Club's Conservation Department.

The only snowshoe with a
ROTARY CLAW

SNOW CLAWS teeth bite into snow
for sensational traction

Send for free brochure

SHERPA SNOW CLAW

Also in kits

2222 Diversey Chicago, IL 60647
Phone (312) 772-6200 Dept. A

Iceland

J. RUSSELL BOULDING

THE EARTHLY DISASTERS that plague humans throughout history—flood, fire, famine and pestilence—have assumed grand proportions on the island of Iceland. Fire in Iceland is the fury of the fire god, Surtur, and volcanoes have erupted an average of once every five years since the island was first settled. Floods may be of fire or water, or both. In 1783, the Lakagigar eruption poured forth molten lava for 40 days, an amount equal to twice the daily flow of the Rhine River at its mouth.

In Iceland's northern landscape, a volcano may erupt beneath a glacier, and the result is what Icelanders call a *jökullhlaup* (glacial burst), a devastating flood of hot water, ice, rock and volcanic ash that comes sweeping out of the mountains.

In addition to these disasters, Iceland has also had its share of famine and pestilence. The bluish haze from the Lakagigar lava flow stunted the grass crop throughout the island and killed 50% of the cattle, 76% of the horses and 77% of the sheep—one fifth of the human population starved to death. Just 75 years earlier, a smallpox epidemic had killed more than one third of Iceland's population.

Located in the North Atlantic Ocean, just below the Arctic Circle, Iceland is hardly a gentle place. Only about 20% of the island supports stable vegetation; glaciers cover about 12%, rugged lava fields 11%, barren glacial-outwash sands 4%, lakes 2%, and the remaining 50% is classified as "other wasteland." Nevertheless, the Vikings who settled Iceland 1100 years ago put down tenacious roots that sustain the current population of 220,000.

Icelanders are proud that their country is clean: a local brochure about camping claims, "There being no pollution, the water in almost any stream or lake is perfectly safe to drink." Iceland's western rivers offer some of the world's best salmon fishing, as well as providing abundant, clean energy. The amount of hydroelectric power Iceland could economically develop corresponds roughly to the yearly output of seven 500-megawatt power plants; of this, about 11% has been developed so far.

Since the land is almost entirely volcanic, Iceland has virtually no fossil-fuel resources (very small deposits of low-grade lignite do exist), but geothermal formations near the earth's surface provide another source of energy. Iceland's geothermal-energy potential equals its hydroelectric potential, and all hot water and space heating in the capital, Reykjavik (population 110,000), is



Vestmannaeyjar Island. In the foreground, a lava field steams at the mouth of the harbor.

supplied by hot groundwater pumped directly from the earth. By mid-1980 the National Energy Authority expects that geothermal sources will supply space heating and hot water for 60% to 65% of the population; so far, less than 10% of Iceland's geothermal energy has been harnessed.

The combination of relatively inexpensive renewable energy resources and the rich fishing grounds that surround the island has brought a level of affluence undreamed of by earlier generations of Icelanders. Inevitably this affluence has begun to affect the environment. A brochure for Reykjavik boasts that it is "the smokeless city" owing to geothermal energy, and certainly the clarity of

the crisp subarctic air makes the brightly painted roofs of the city sparkle on a clear day. But sometimes, when an atmospheric inversion prevents dispersion of the nitrogen-oxide emissions from the nearby state-owned fertilizer plant, a yellow haze lies over the city.

One source of embarrassment to environmentally concerned citizens in Reykjavik is the sewer outfalls exposed above water at low tide, scarcely 20 yards from shore. At high tide, their location is marked by the black-backed gulls that scavenge in the untreated sewage. The Icelander who showed me these outfalls commented sadly that when he was a boy his family harvested shellfish from the bay right at Reykjavik. Now pollution makes it unsafe to eat shellfish from any part of the bay.

A Swiss firm, attracted by the prospect of cheap electricity, finished an aluminum smelter south of Reykjavik ten years ago. A 240-megawatt hydropower plant, the largest in Iceland, was built near Mount Hekla (thought during the Middle Ages to be the entrance to Hell) to supply the smelter with electricity, and the aluminum plant now consumes 40% of the electricity produced in Iceland. Air pollution has damaged vegetation near the smelter, and workers there have experienced health problems. Icelanders, however, seem to have a low tolerance for these byproducts of industrial devel-

opment. The aluminum smelter was only the third major industry in the country (in the 1950s, state-owned fertilizer and cement factories were built), yet many people express strong reservations about further development.

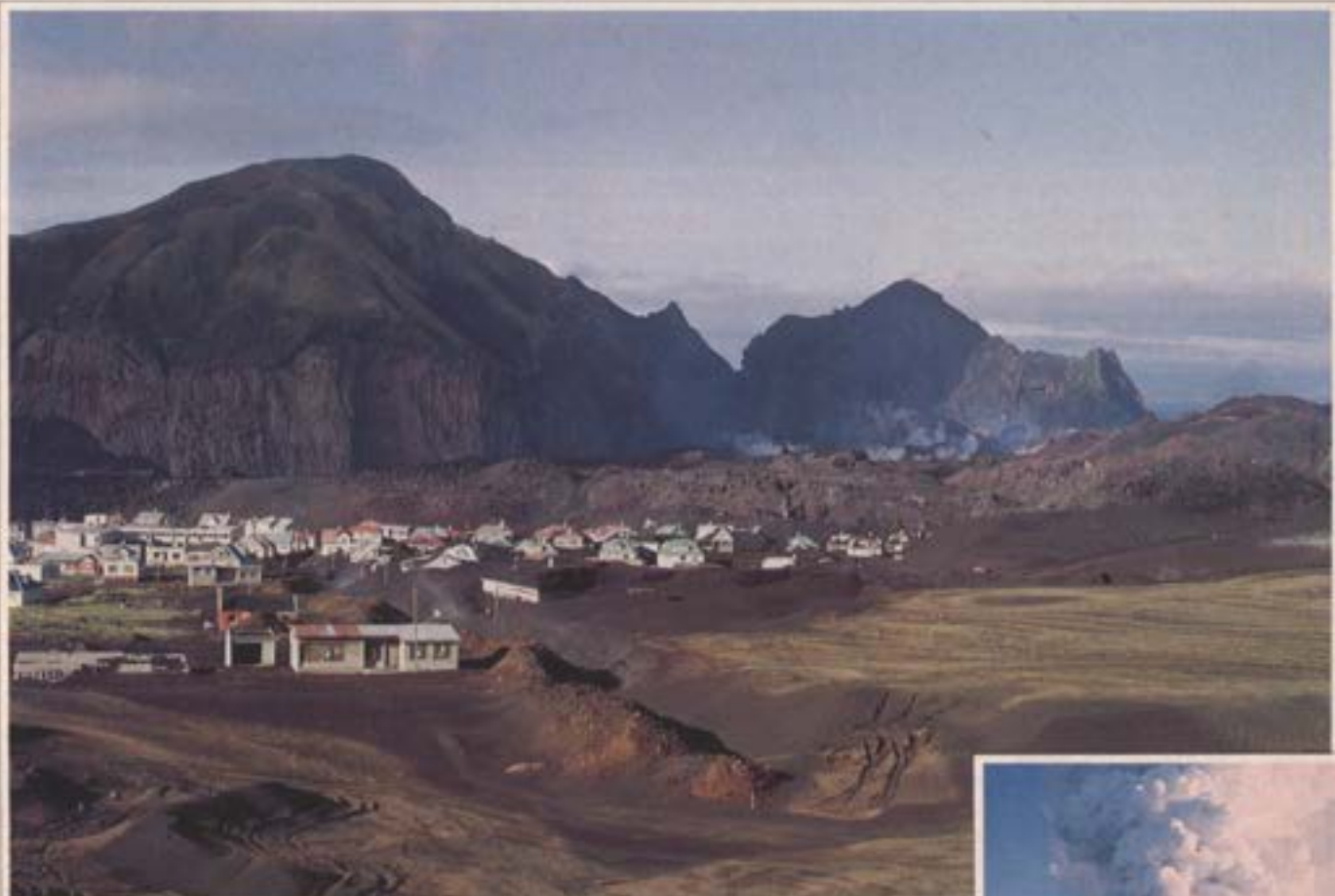
It was in the fourteenth century that the body of oral law that had grown during the preceding 350 years was written down, and Iceland's environmental laws can be traced back to that first written record. The early laws were aimed more at protecting personal property than at preserving the land itself—one such regulation said, "If someone walks or rides

fledged ducklings. Seventy-six bird species nest on the island, and a total of 230 species have been observed there. During the Middle Ages, the Iceland falcon was in great demand by European nobility, and today the island is one of the major waterfowl breeding grounds in Europe. Lake Myvatn alone, in northeastern Iceland, supports 17 species of nesting ducks.

In contrast to the United States, where the environmental movement grew in the late 1960s as a response to pressing pollution problems, Iceland's concern developed as much in anticipation of environ-

mentally owned. Larger areas of unusual landscape, vegetation or animal life can be protected as nature preserves. Among other specific provisions of the act is a ban on billboards outside densely populated areas.

Iceland doesn't yet have any organizations corresponding to the environmental activist groups of the United States, but in 1969 a number of forestry associations, gardening and hunting clubs and other concerned groups formed the Iceland Environment Union. A loose coalition of 60 organizations, the union has a combined membership of 80,000—more



Above: The outskirts of the town of Heimaey, partly buried in lava. At right: A distant view of the dramatic volcanic eruption that did the damage.

through a cornfield or meadow or a grassland and does not follow the treaded path, he must pay the owner one mark of silver."

Iceland has rich and abundant bird life, and it is not surprising that early conservation efforts had bird protection as a focus. The first modern nature-conservation law, passed in the middle of the nineteenth century, involved the protection of eider ducks and the hunting of birds. Hunting the eider duck is still prohibited; Icelanders benefit by collecting the valuable eiderdown from the nests of

mental problems as in response to them. In 1967, 25 species of rare plants were placed under state protection, and Iceland's second national park was established at Skaftafell to preserve one of the most isolated and beautiful spots on the island. The next year a law was passed controlling the use of pesticides, and in 1971 Parliament established the Nature Conservation Act, a landmark in Iceland's environmental legislation. This act allows protection of unusual natural features by their designation as national monuments, even when the land is pri-





Akureyri, a major city in Iceland's North.

than a third of the nation's population. However, the union's political effectiveness is lessened somewhat because most of the member organizations are located in Reykjavik and other urban centers, which are not as well represented in Parliament as agricultural interests. The conservative farmers in rural Iceland have power in Parliament disproportionate to their number, just as United States senators from rural states often have considerable political clout, independent of the number of constituents they represent.

Iceland's soil is terribly susceptible to erosion, and a combination of factors has made eroded land all too prevalent. Where there is no vegetative cover, the volcanic soils and glacial outwash sands are easily worn away by wind and water. And when existing vegetation is damaged, recovery is especially slow because of Iceland's short growing season and harsh climate. When the Vikings first discovered Iceland, 60% of the land had both soil and vegetation, 50% of which was birch forests. Today about half the soil that originally supported vegetation has been lost through erosion, some of it caused by poor farming practices. Scarcely 1% of the island supports scattered remnants of forests.

The primary culprits in the denuding of Iceland's fragile soil cover are sheep, which, next to fish, are the mainstay of the island's economy. Like white balls of lint on the fabric of the landscape, sheep are dotted across any vista. The forests were largely wiped out within a hundred years after settlement in about 870 A.D.—they were burned for charcoal



Some of the impressive fireworks that characterize the volcanic landscape of Iceland; a lava flow from an eruption at Surtsey hisses in the sea.

and cut to make pasture for sheep. Overgrazing then exposed the soil to the elements, causing erosion.

Farmers, with some justification, blame the erosion on the land itself, claiming that the many destructive volcanic eruptions have been the principal cause. The first settlers were able to grow grain, which is impossible today. Since then, volcanic eruptions and ongoing climatic change have taken their tolls on Iceland's forests, grasslands and tundra. The "Little Ice Age" of the fifteenth century brought climatic conditions even worse than today's.

The volcanoes wreak destruction, but they also enable scientists to document in great detail human effects on Iceland's environment; each eruption has a distinct

signature—the ash has a particular color and chemical composition. Techniques of tephrochronology (dating of events by volcanic ash) allow archaeological sites frequently to be dated to within a few decades. One volcanologist, Sigurdur Thorarinsson, has used tephrochronology to trace the effects of Viking settlement on soil erosion: Within 60 years after the first successful settlement, people occupied all of Iceland except the barren deserts of the interior. Thorarinsson has also found a dramatic increase in the thickness of alluvial material between layers of volcanic ash deposited all over Iceland just after this settlement. According to his evidence, the erosion increased at a steady rate until the beginning of this century, when rec-

lamation of eroded areas was begun.

Today reclamation is done by two agencies, the Iceland Forest Service and the Land Reclamation Service. The first step in the process is putting up a fence to keep out sheep. If there is a birch-seed source nearby, the native forest will reestablish itself naturally, or, if the Forest Service is in charge, trees will be planted. In the Land Reclamation Service's bailiwick, the fenced areas are seeded and fertilized from the air. As of 1978, the Forest Service had fenced off about 100,000 acres and the Land Reclamation Service almost 500,000; this area is equal to about 8% of the land devastated by erosion.

In spite of the reclamation, soil erosion continues at a great rate in many areas, and much greater land-management efforts are needed to control it. Unfortunately, Iceland does not have a well-established program (such as the Soil Conservation Service in the United States) to advise farmers how to control erosion. A recently passed law allows the government to regulate the intensiveness of grazing on private land, but so far resistance by farmers to governmental intrusion has prevented the law from being enforced. However, the freedom of the Icelandic farmer to mistreat his own land with impunity is likely to be restricted more in the future; the Farmer's Party lost a number of parliamentary seats in the 1978 election, and this may open the way for stricter environmental control.

In a country about the size of Kentucky, Icelanders have already designated an impressive number of areas for special protection. As of April 1978, 49 natural areas had been put under the aegis of the Nature Preservation Council, and an additional 150 sites had been proposed. In addition to Skaftafell National Park, there are two others. Thingvellir National Park, northeast of Reykjavik, was established in 1928 to commemorate the thousandth anniversary of the Althing, the first parliament in Europe. The Althing met in the open air at Thingvellir for almost nine centuries, and besides its historic importance, the Thingvellir area is also very interesting geologically. Iceland's third national park, established in 1973, is Jökulsargljúfur (Glacier River Canyon), a large canyon in northeast Iceland carved out of volcanic lavas by glacial bursts. Among the park's features is Dettifoss, one of the country's most powerful waterfalls.

Waterfalls and wetlands are the focus of current efforts to protect more of Ice-

land. No waterfall has been declared a national monument, though a dozen have been proposed; the government wants to keep open the option of hydroelectric generation. Even Dettifoss has been reserved for possible development. Fortunately, to date, the large number of possible dam sites has allowed dams to be located where environmental conflicts are minimal.

Wetlands, the habitat of many bird species, are an important part of Iceland's ecological fabric, and they are also another source of conflict between farmers and environmentalists. Formerly, wetlands were harvested for hay to feed livestock through Iceland's long winter. But cultivation of drained wetlands produces much higher yields. About 1% of Iceland is now cultivated wetlands, producing 99.5% of the country's hay. Large-scale drainage of wetlands by mechanical excavating began in 1942, and so far an estimated 275,000 to 320,000 acres have been drained; the process continues at a rapid rate because the government subsidizes 70% of the cost of digging drainage ditches. Conservationists are upset by this subsidy because wetlands are being destroyed in places where agricultural benefits will be less than the value of the undisturbed habitat.

After soil erosion and wetlands drainage, the third most commonly mentioned environmental problem in Iceland is tourism. In past years Iceland was mainly a stepping stone between Europe and North America for travelers flying Icelandic Airlines, but now more and more tourists make Iceland their primary destination. Conservationists worry especially about the increasing number of people traveling in the interior, where land is highly susceptible to damage; 40-year-old scars from the earliest motorized tours are still evident today. Iceland's Department of Tourism resists suggestions that visitors be restricted. But according to Haukar Hafstad, director of the Iceland Environment Union, "The government now limits the number of sheep in the interior. Soon we will have to do the same with tourists."

In 1980, the environmental problems Icelanders are dealing with are still largely in their early stages. Even so, this could be a matter of survival: The margin of error is not great in Iceland's fragile land. □

J. Russell Boulding is a free-lance writer and consultant specializing in public-interest work.

Hike the Alps.



Swissair flies to beautiful and challenging hiking trails in the Swiss Alps, on specially guided tours. Fred Jacobson, author/mountaineer, will lead small groups on hikes from Kandersteg, Lenk, Pontresina, Saas-Fee and Zermatt. Accommodations in delightful country inns. Superb cuisine. For active outdoor people who also like their creature comforts. Our 8th summer! For information write: Fred Jacobson, Dept. SC, Chappaqua Travel, 24 South Greeley Ave., Chappaqua, New York 10514.

swissair



Unique Free Catalog



Detailed charts, facts/figures and photos make EMS catalog unique. They help you compare product specifications, performance data, make it easier to select the right hiking, climbing, camping gear. Catalog also gives information on care, proper use of outdoor equipment. Covers tents, sleeping bags, packs, boots, clothing and more. Latest full color edition now available.


Please send me your free catalog. Thanks.

Name _____

Address _____

City _____

State _____ Zip _____

 Eastern Mountain Sports, Inc.
16201 Vose Farm Road
Peterborough, New Hampshire 03458

Canoe Canada's Arctic

12 days from
\$875
18 days from
\$1275



Fly in canoe trips into the heart of North America's last wilderness—the tundra and taiga of Canada's Northwest Territories. Discover the warm (in summer) spectacular scenery and unparalleled wildlife concentrations of a land untouched by man. Explore unknown rivers and lakes. Photograph caribou, white wolves, muskox, rich birdlife. Enjoy fishing for lake trout, grayling, arctic char, northern pike. Small groups of persons maximize interest and guided exclusively by Alex Hall, wildlife biologist and veteran arctic canoeist. All food and equipment provided. PREVIOUS CANOEING EXPERIENCE AN ASSET BUT NOT ESSENTIAL FOR ALL. Routes selected for compatibility with clients' interests and capabilities. Two-way radio. Departure June 1-Sept. 15. For brochure write:

CANOE ARCTIC INC.
3 John Black Crn.
Bumpass, Ont., Canada
L1W 7T2

The 7-Day Baja Adventure

Backpacking and exploring in tropical canyons, snorkeling, swimming in the pristine Sea of Cortez, with experienced guides. All equipment provided. Eleven expeditions through May, 1980.

OUTBACK ADVENTURES, INC.
505 Fruit NW
Albuquerque NM 87102
(505) 842-6226

ENGLISH WANDERER

Guided Walking Holidays in the English Pennine Hills, The Lake District, Dartmoor and Exmoor. Farmhouse-Style Accommodation.

For further details write to:

ENGLISH WANDERER

13 Wellington Court • Spencers Wood
Reading RG71BN • England
or Telephone Reading 882515

Plutonium, 480,000 years



1st "Collector's Edition"
ANTI-NUCLEAR
T-SHIRT
[hand screened]

X-RAY, tri-color, print on tan, blue, or "SUN" yellow quality T-SHIRTS. Specify color and size. SEND \$7.00 ea. \$70.00 a doz. check or M.O. to: P.O. Box 16274

REACTION GRAPHICS
Phoenix, Arizona 85014
In Arizona add 5% sales tax

Finding the Lost Coast

JULIE VERRAN

THE INTENSIVE development of California's coast has spared one area—a wild shoreline with old-growth redwoods, mountain lions, bears, eagles and osprey. It's called the Lost Coast, a 50-mile stretch of mountains, cliffs and beaches in Northern California between Ferndale and Rockport, and it's "lost" because no highway runs near its length. The coastal road dips inland to seek a flatter, valley route north; thus, the Lost Coast has escaped the motels, the franchise restaurants, the tourist attractions and gas stations that mar so much of California's coast. But even this remote area is threatened by logging and by off-road vehicles.

The region is a complex patchwork: The northernmost portions are private ranches; the central part is the King Range Conservation Area, administered by the Bureau of Land Management; and the southernmost part is the wildest and most threatened. It is here that California recently established the Sinkyone Wilderness State Park, and it is here that logging companies are busiest, in some cases destroying woodlands even before they can be acquired for the full park.

Logging is not unknown in the area. The Lost Coast was settled country once, with sizable towns that have since vanished; they literally cut themselves out of existence, leaving behind fine stands of old-growth redwood and Douglas fir on slopes too steep for traditional logging methods. But today's loggers, with modern equipment, can cut these old-growth stands—on slopes as steep as 95 degrees. They can and they do.

The situation is depressingly familiar to park enthusiasts nationwide. The state of California, in the mid-1970s, conducted an extensive series of studies of the Sinkyone area and came up with a park proposal much applauded by conservationists. But the state did not have enough money to acquire all the land for a complete

Sinkyone Wilderness State Park. Although the state bought some of the land, Georgia-Pacific bought other areas within the proposed park boundaries and proceeded to log them at a quick pace. Some local conservationists believe Georgia-Pacific is cutting so fast because it knows it will eventually lose. An elaborate land exchange is currently being negotiated by state officials, logging companies and conservationists.

Georgia-Pacific's management strategy for these lands calls for clearcutting and "overstory removal," leaving only a few tan oaks and madrone trees. The redwood and fir roots are being bulldozed out and burned with the rest of the slash so that a clear field can be planted with hybrid fir seedlings. The company's stated goal is to establish even-aged stands for periodic harvests, though it seems unlikely that repeated cuttings could prove economical—or environmentally feasible—on such steep slopes; from the sea, the land rises 1500 feet a mile.

Logging has already destroyed several archaeological sites, remnants of the native Sinkyone people for whom the park is named. Recently the California Division of Forestry won a legal action against Georgia-Pacific for negligently destroying one major archaeological site.

Now, the region's most urgent need is for public acquisition of the remaining Lost Coast lands; the state government should hear that people all over the nation want wild coastal lands preserved for recreational use. A trail has been proposed for this area, and it needs support to become a reality. Letters should be directed to Governor Jerry Brown and State Resources Secretary Huey Johnson, Sacramento, California, and California residents should write to their state legislators in support of Lost Coast land acquisition and the proposed trail. □

Julie Verran is an activist for Sinkyone wilderness and a delegate to the Sierra Club's Northern California Regional Conservation Committee.

*Points East of the Hudson River Are Cut Off
From the Rest of the American Continent*

The Great Northeast Railway Dilemma

NEIL GOLDSTEIN

HOPPER CAR, box car, container car; one after another they passed along the Hudson River's west bank. Altogether I counted 84 cars from my vantage point aboard the Day Line boat as we sailed up the Hudson to Bear Mountain. Thirty miles south, where the Hudson meets the sea at New York City's harbor, the river spreads to more than three miles wide. But from where I stood on the boat's upper deck, I was able to take in, in a single panorama, the essence of one of the more intractable and important environmental/economic/energy/transportation dilemmas in the Northeast; many trains can't get directly to New York City.

The Hudson River poses a barrier for freight trains from the South bound for the Northeast: No rail-freight bridges or tunnels span the Hudson at New York City. The nearest crossing is 160 miles north at Selkirk, New York, near Albany. Trains from the West and Midwest following the water-level route from the Great Lakes through the Mohawk Valley to Selkirk can cross the river, but on the east side they encounter prohibitively low clearances. The two barriers, the river itself and the low clearances, combine to allow far less rail traffic on the east side of the Hudson than on the west. Amtrak has a successful passenger run from Washington, D.C., to Boston. But where freight rail shipment is concerned, points east of the Hudson are effectively cut off from the rest of the American continent. The result? The area between New York City and southern New England, already depressed economically, is also despoiled environmentally by long-haul trucks, and dependent on energy-wasteful highway freight-haulers for goods from the South.

The effects of the rail-freight barriers are severe indeed. In New York City, for example, only one rail car is in use for every 41 people, compared to the national average of one for every 6 people. Even when these figures are adjusted to account for the city's particular indus-

trial/white-collar mix, New Yorkers are more than three times as truck-dependent as the city's location and resources can justify.

Of course, the virtual blockade of rail shipment from the South directly to New York City, Long Island, southern Connecticut, Massachusetts and Rhode Island does harm to more than the 22 million people in those areas. The blockade also hurts shippers in the South and, from an environmental perspective, it undermines the vitality of the entire East Coast rail network. Everyone in the eastern U.S. is made more dependent on energy-wasteful, polluting trucks. Because coal cannot be brought into the Northeast by rail, the region is also dependent on oil, imported by ship.

Several possible solutions to this problem have been proposed, but one seems best to Sierra Club experts: building a tunnel under the Hudson at the New York harbor. This idea has long been considered; in 1922, New York City actually began building such a tunnel, but work was stopped because of a dispute over whether New York City or the Port Authority of New York and New Jersey (formed in 1921 to unite the region's transportation system) should build it. The unfinished tunnel portals are still visible today.

The problem with the tunnel idea in 1979 is its cost, now more than \$1 billion according to Port Authority estimates. The Port Authority also argues that there would not be enough traffic to justify building a tunnel because diversion of the traffic that now moves through Selkirk and by highway is uncertain, and because rail traffic to New York City would be impeded by the bottleneck in the rail system at Baltimore Harbor.

But tunnel supporters, such as New York Assemblyman Jerrold Nadler and Representative Elizabeth Holtzman (D-New York) come to a far different conclusion. According to Holtzman it

makes sense to examine any tunnel project from a national perspective. A tunnel for rail freight would save an enormous amount of energy; trains use 25% as much energy as trucks for the same volume of freight. The lower consumption of gasoline will, in turn, reduce air pollution, and the improved rail network will make rail transportation more efficient nationally. But these undoubted benefits are not without associated costs. The bottleneck at Baltimore should be eliminated at the same time that the Hudson River tunnel is built—this would, of course, increase costs considerably. But a toll for tunnel use indexed to the costs of petroleum-oriented truck-freight shipment could pay a large portion of the expense of building the tunnel.

Club leaders in the Northeast have been working to make the tunnel idea a reality. The stumbling block is that no single governmental entity has the required capabilities: a vested interest in improving the environment and economy of the region east of the Hudson River, and the financial wherewithal to begin the tunnel project. This problem is compounded by the cloudy financial situation of the railroads. Nationally, railroads have been averaging about 1.5% return on investment in recent years. Conrail, the near-monopoly railroad serving most of the northeastern United States, is in equally bleak circumstances. When Conrail was first formed in 1976 to replace six bankrupt railroads in the Northeast, it was expected that this government-financed (but private, for-profit) corporation would show a return by 1979. Despite \$3.3 billion in federal subsidies, this financial success has not occurred. In fact, the U.S. Railway Association reported in 1978 that Conrail could need as much as \$3.8 billion in additional funding just to complete projects in its existing plans. Clearly, many of the much-needed rail-freight improvements in the Northeast must be funded from sources other than Conrail. Some funding has been provided for railroad-system im-

A BIT OF COMFORT OUT THERE— ANYWHERE!

Used to be a chore to gather firewood at day's end, especially on remote beaches and mountain crags. No more. Camping Gaz S200S folds for compact storage in hiking pack. A favorite in 125 countries, often the solitary adventurer's choice.

The Lumogaz C200S is an ideal companion lantern. Automatic, safe ignition, 20-80 watts in all weather. Camping Gaz stoves and lanterns operate on convenient, easy-to-pack butane cartridges.

Sooner or later, you'll discover Camping Gaz make it now.



Innovators in outdoor living products™

wonder Corporation Of America, Stamford, CT 06902

provements from other sources. As Club leaders were quick to point out at a Club-cosponsored conference last June, "Rail Freight, Its Role in the Ecology and Economy of the Northeast," many of these currently funded or soon-to-be-funded projects are essential; without them even a rail tunnel makes little sense.

For example, one major problem faced by railroads in the Northeast is the obsolete condition of rights-of-way. Studies show that very large trucks are not more energy efficient than smaller trucks. The larger vehicles cause an extraordinary amount of damage to highways that requires roadway reconstruction and repair—repairs that consume energy. But large rail cars do save energy, and they help railroads compete with energy-wasteful trucks. Unfortunately, many railroads in the Northeast cannot take advantage of these energy-conserving and economically superior large freight cars; older railroad rights-of-way, built for smaller cars, sometimes have overhead-clearance impediments or track-curvature problems that preclude the use of the larger, modern cars. Also, older railroads often are also unequipped to provide "piggyback" rail service—trailers or containers on flatcars—that can further help a railroad to compete with trucks. Piggyback service requires high clearances and specially equipped rail terminals. Developing adequate terminal service is essential for the eventual success of the Hudson River tunnel.

Limited funds have been provided from state governments and regional agencies for rail-freight improvement. But more than \$1 billion is needed to build the tunnel itself, and before funding commitments of that magnitude can be secured, proof must be in hand: The tunnel project must be proven capable of the benefits claimed for it.

New hope for developing that proof now exists. Through the efforts of Representative Holtzman, the Port Authority of New York and New Jersey has agreed to undertake a comprehensive study of the potential benefits of building the tunnel. This major study, which will be completed by February, should determine once and for all whether our judgment is correct. Until then, the two uncompleted rail-tunnel portals at New York's shoreline remain mute monuments to a time when railroads played a major role in our nation. Perhaps that time is upon us again. □

Neil Goldstein is the Sierra Club's East Coast representative.

DAY PACKS

For Hiking, Biking, School & Skiing

All Packs as shown with these added features:

Water Repellent • Durable nylon construction
Comfort-padded adjustable shoulder straps • All blue colors • 30-day money-back guarantee
• Shipping costs included

STANDARD PACK

31" x 11" x 15", Traditional Design

Only \$8.95 delivered!

(Deluxe Model Double-strength Beige Trim Blue Nylon With Spring Tension Waist Band
Only \$13.95 delivered!)



NORDIC PACK

5" x 12" x 17", Maximum Capacity Design (With waist band)

Only \$12.95 delivered!



TEAR DROP PACK

4" x 13" x 16", Stream-lined Design!

Only \$10.95 delivered!

(Deluxe Model "Triple-strength" Brown Nylon With Spring Tension Waist Band
Only \$20.95 delivered!)



Free surprise gift with every order!

Send check direct to:
COCONO, Suite 217-C, 564 Central Ave. Alameda, CA
94501, 415-865-6060
Call residents add 6% sales tax

Name _____
Address _____
City _____ State _____ Zip _____

Fabulous Folboting NOW

Avoid the risks and discomfort of fuzzy canoes, skiboats, kayaks, wobbly inflatable rafts! NOW, you GLIDE securely in perfected Folbot, completely revised in EXCLUSIVE SWIMBACK COMFORT. America's foremost small craft in various styles and colors. Now 2 to 4 rowers. GLIDE smoother, faster with EASIER lightweight double blades, efficient yacht smart sails, small motors. Perfect for nature study, scouting, team training, supervised or unsupervised. Let's Make and Use Most INEXPENSIVE in EAST PREFAB Kits or ready FACTORY BUILT. Also travel smart FOLDING. Fits in car, inside trunk or aircraft!



FOLBOT

Super Craft at BIG SAVINGS
Easy PREFAB

Kits from \$134 or cartop
FACTORY BUILT from \$249
FOLDING from \$429
Ideal Sail Rig \$229

Smart Economic BASIC Kits
12 foot Single \$36
16 foot Double \$44
Big Sailer 24 foot \$57

FREE

Action Color Catalog With Facts & Figures

For rush inc. \$1 First Class Postage

Mail coupon or address

to: FOLBOT CORP. SB 180
Charleston, S. C. 29405

Print Name _____
Address _____
City _____ State _____ Zip Code _____

Step by Step Through The Grand Canyon

Text and Photographs by
WILLIAM KEMSLEY, JR.

THE LURE OF THE WEST was upon us, three friends and me. We planned a difficult, two-week hike into a remote part of the North Rim of the Grand Canyon to see the ancient Indian ruins and to retrace an historic route used by horse thieves back in the 1800s. The route couldn't be done in summer—not enough water. So Kenn, Charley, Curtis and I decided to hike it in winter. The trip necessitated months of planning—for the menus, pack loads, special routes, river-crossing hazards, trail conditions. But on February 16 we were on our way, determined to meet the unusual challenge of winter hiking in the Grand Canyon—but also resolved to take it easy and have a good time. Here are some of the highlights.

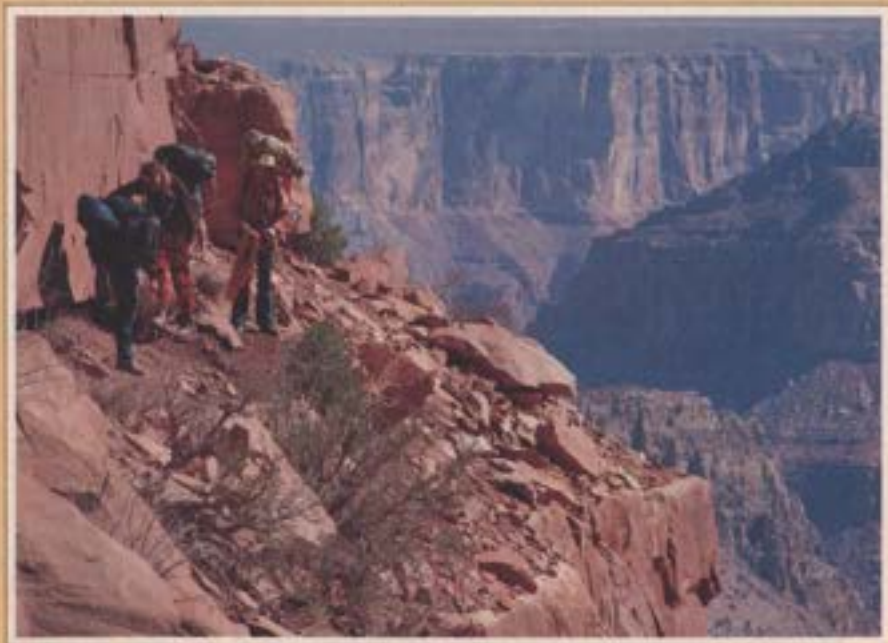


1 Our easy-going ways began the first morning. We had only three miles to hike and about 1200 feet to ascend, though at times we plowed through two feet of snow. It took us two and a half hours to reach the saddle, where we had our first glimpse of the canyon depths.



2 Our first trail lunch—homemade logan bread, gorp and two ounces of semi-sweet chocolate. The weather was sunny, balmy, quiet and beautiful. We lolled there, saving our oaks and aahs well into the afternoon. Then we rehearsed rope handling until I was sure everyone understood the knot-tying and rope techniques we would use on the route's more dangerous climbs—before we actually had to perform.

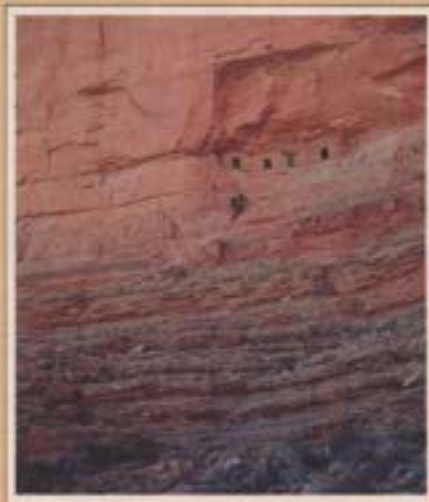
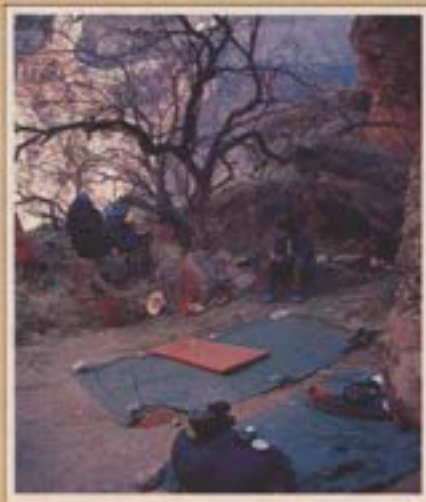
3 This day's portion of the trip would have been the most perilous and exciting even without the wind. One writer described the route drily: "Keep on whether you see the trail or not, as rock slides have obliterated much of it." There was little point in looking ahead for signs of the trail; the canyon walls were so steep I couldn't believe we would get through. Twice on this section of the trail we used our ropes and climbing hardware for safety. We would first take off our packs, then set up a fixed rope and finally cross the difficult spots with our packs on, working across on delicate footholds, 800 feet above the talus slopes below us.



5 The mouth of Kwagunt Creek on the Colorado. The creek was running full enough to be potable, but the water was red with muddy silt and sand. To clarify a water supply for the camp, we dug a hollow in the sand and laid in a sheet of plastic, then poured Kwagunt Creek water into it so the sediment would settle out. Curtis drank "only a mouthful" of the Colorado River water because he thought it looked so invitingly clear. And he suffered with diarrhea for the next week.



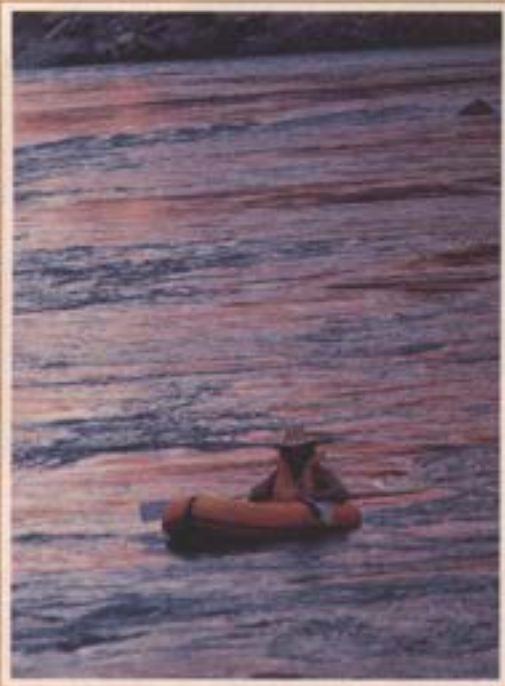
4 Wending our way cross-country, we occasionally retraced our steps when a rolling hill we started down ended abruptly in a cliff. A few hours later we hiked along the creek until we found a good campsite, made camp and then strolled down for our first close look at the Colorado.



6 The most-visited Indian cliff dwellings at the mouth of the Nankoweap. Because the ruins are so close to the Colorado, they are visited frequently by river runners—and we found them to be in surprisingly good condition. At lunch in the cliff dwellings, looking out over the river, we got a sense of what it must have been like to live in the little cubicles.



8 At Beamer's Cabin, Beamer was a prospector who had expropriated an Anasazi cliff dwelling and made it into a cabin complete with window, fireplace and hinged door. Today it's a veritable unofficial museum, with a collection of Indian potshards, broken bottles, tin cans, arrowheads, pieces of leather straps and square nails—relics of the place found and set about on display by visitors.



7 Crossing the Colorado was a long and dangerous trial. First we tested the boat for leaks and tried roving it. We tied a climbing rope to the boat, and Charley, who was most familiar with the craft, climbed in, pushed off and tried the oars. Next, Charley took Ken on the first crossing... the return trip was the most daring of all the things we did on our entire trek. The strategy was to get into the back eddy at the far shore, follow it upstream and then row out into the swiftest part of the river, letting the current carry the boat back toward our shore. Charley later said it was very lovely getting out into the middle of that fast current on the return trip. As it turned out, all I had to do to get him back to shore was to drop the line into the boat as Charley swept by directly below me.



9 The most significant "sight" of the trip, the Sipapu, a sacred Hopi shrine. It is a mound of rock about 20 feet high on the Little Colorado's north side. We climbed it to observe the water bubbling inside; it is warm and carbonated. Hung along the Sipapu's inner walls are feathers left there by Indians, whose legends tell that the Mother Spider laid her eggs inside the Sipapu, where they hatched into the first human beings, the ancestral Hopi.

William Kemsley, Jr., is editor of Backpacker.



The resorts of Miami Beach depend on the beaches. But the beach has been disappearing for years and periodically must be rebuilt, at enormous expense.

Concern for the Coasts

The Beaches Are Moving: The Drowning of America's Shoreline, by Wallace Kaufman and Orrin Pilkey, Anchor Press/Doubleday, Garden City, New York, 1979.

ERIC SALZMAN

THE COAST has often been described as a battleground, the site of a fierce and unending battle between land and sea, a place where upheaval and change are the norm. Perhaps. One might view it just as well as a fulcrum, a place of delicate balance where some of the mightiest of natural forces coexist in an ever-changing, never-changing dynamic equilibrium.

This is not just poetry or cracker-barrel philosophy, but established scientific

fact. The processes at work are remarkably like those of biological evolution. As you might suspect, real trouble starts when humans interpose with their heavy hands.

Much of our received knowledge about the processes that shape our shorelines—including nearly all the stabilization principles of that greatest of all stabilizers, the U.S. Army Corps of Engineers—is based on hearsay and wishful thinking. Now the facts are in. The fastest way to destroy a beach is to try to stabilize it.

North Carolina has the largest areas of undeveloped beach in the eastern United States and it has been the site of many of the recent major studies of beach processes. It is logical that one of the first

major popular books on the current state of shore affairs should come from there. Much of the character of this book comes from the fact that it is a collaboration between a geologist specializing in shorelines (Pilkey) and a realtor/appraiser who is also a conservationist (Kaufman). Their book contains excellent descriptions of how shorelines work and how, left to their own devices, they protect and maintain themselves. They show the tremendous costs of beach stabilization and construction: the loss of the beach itself, the expenditure of billions of dollars in pursuit of a chimera and, ultimately, the loss of tens and even hundreds of thousands of lives in the inevitable disasters that must come.

There are many different kinds of shorelines in North America: the drowned mountain valleys of New England, the dune systems of the Great Lakes, the mangrove swamps of Florida

and the Caribbean, the glacial fjords of Alaska. But Pilkey and Kaufman are principally concerned with our two major oceanic coasts: the headlands, cliffs and coves of the Pacific shore and the sandy barrier beaches of the Atlantic and Gulf coasts. The two types are not mutually exclusive: The West has its sandy beaches, often in the form of spits and bars crossing the mouths of coves and rivers, and the East has its coastal headlands in the Long Island/Cape Cod glacial moraine. The principles are basically the same in all cases. The sea mines the headlands for sand, which it redistributes in the form of bars and beaches. The action of the ocean in smashing the cliffs and grinding down pebble and rock to their irreducible minimum, the grain of sand, provides the principal source for the Pacific beaches. The East is more fortunate. The glacier created and transported huge quantities of sand along with the pebbles and rock that constitute the moraine. At least half of the original moraine has been broken down and redistributed by the long-shore ocean currents in the last 10,000 years, and the process is still very much in operation. Coastal rivers, including the Mississippi, and eroding coral reefs are other major suppliers of beach material in the unglaciated South.

In this post-glacial era, the sea continues to rise. On the Pacific Coast, the land rises as well. Without cliff erosion there would be no West Coast sand beaches at all. The Atlantic/Gulf situation is a little more complex. Starting at Cape Cod and running down to Miami Beach and then around on the Gulf side all the way to Texas and Mexico, the barrier-beach system—the largest in the world—is made up of offshore bars and islands enclosing a system of fresh or brackish bays and marshes. This system maintains itself in the face of rising seas and heavy storms in a surprising way that has only recently been documented. Barrier islands migrate! Like a spring system built to absorb shocks, they take the heavy blows by riding with them. During the winter seas, the front part of the beach is sacrificed to form an offshore bar that cuts the impact of the breakers. The bar is then reattached by the balmy summer sea. Major storms and hurricanes break through the barrier islands to form inlets that are themselves naturally unstable; as the islands migrate, so must the inlets.

Eventually most inlets silt up; bay and ocean go their separate ways until the next big storm makes another inlet. When storms and hurricanes coincide with high tide, storm water washes right over the dunes. Far from being a disaster, this overwash actually deposits sand on the protective rear dune ridge and provides sand for the construction of new marshes behind. Repeated assaults from the ocean will cause the entire island to tumble over itself—generally in the direction of the mainland. Barrier islands protect the mainland by absorbing storm punishment, and they maintain themselves by a series of strategic retreats.

At least they did, until people decided that barrier beaches are fun places to work and play; that an ever-changing complex of beaches, dunes and marshes is solid real estate to be surveyed, laid out in straight lines, sold, purchased, maintained, hardtopped and built upon foot by foot, acre by acre—houses, roads, condominiums, motels, concession stands, parking lots, marinas. Until people decided to level dunes or trample them down with the pounding of feet or eternal internal-combustion-powered wheels. Until people decided to protect and stabilize inlets by dredging and by jetty construction. Until people decided to protect private beach property with groins, jetties and seawalls that are often more expensive than the property they are designed to protect. East or west, the iron law of the beach is easy to state: the more you build up and stabilize the beach, the more beach you lose! Miami Beach no longer has a beach, and neither does Cape May or Coney Island.

The modern urbanite's love affair with the beach is extraordinary. Traditional coastal communities knew the ocean's mighty power and built safely inland. People went down to the shore only on earnest and often dangerous business. But our modern city dweller knows nothing of that; the summer house nestled in soft sand is meant to look out on a pleasant and calm prospect. When the prospect turns ugly and threatening, protection is demanded as a right. Do something, somebody do something! Unfortunately, in the doing is the undoing; anything you try to do to make it better only makes it worse.

This is not obscure theory. There is

now a well-documented body of evidence about how these things work, and *The Beaches Are Moving, The Drowning of America's Shoreline* (good title, misleading subtitle) sums it up very well. This is by no means a radical view of our shoreline crisis. Kaufman and Pilkey bend over backward to accept the private property system and the inevitability of beach construction.

Shoreline issues are not purely geological or ecological. In a chapter entitled "Who Owns the Beaches?" Kaufman and Pilkey point out that underwater lands as far as the water line at mean high tide belong to the public, and in some cases courts have extended this boundary up to the vegetation line. Not only are the beaches public but, particularly where usage has been traditional and well-established, there may be a common-law right to beach access. In other words, the public may have a right to cross private land to reach the public beach—even where the NO TRESPASSING signs tell you otherwise.

The conclusions seem obvious. The traditional notion of private property simply cannot be applied to the shifting, water-logged sands of the beach. The protection of private beach property with massive public funding is immoral, probably illegal, certainly impractical and eventually destructive.

Nevertheless our authors do not permit themselves to reach the obvious conclusions. They have resigned themselves to the inevitability of extensive private development of the coast and they propose to act as advisors to potential beach-property consumers (the word "consumer" is appropriate here) with a chapter on "How to Live With a Beach" and a "Checklist for Buying or Building on the Beach." Perhaps there is some use for this kind of advice, but most of us want to know how to save the beach, not how to continue to consume it. The real implications of this book are shoutingly clear: Nothing should be built on the beach! Repeat, nothing. The natural systems are the best we have and the best thing we can do is let them take care of themselves. The beaches should be public, with access by public transportation designed to do minimal damage to the system. No public help should be allotted to beach owners: no insurance, no jetties, no nothing. New construction of any kind should be forbidden. Damaged

property should be purchased and put into the public domain with the funds made available by *not* building groins, bulkheads, jetties, roads, parking lots and seawalls. Simple, no?

Such a radical program is supposedly not feasible politically, but one wonders. On eastern Long Island, where the contrast between the eroding built-up shore and the stable, solid natural stretches is striking, the same comments are heard constantly. "Anyone foolish enough to

build on shifting sands deserves what happens."

The undisguised glee with which such sentiments are uttered suggests not bloodthirstiness, but common sense. The beach belongs to God or to the ocean or to the rest of us in common. Sooner or later, the ocean will reclaim its own. □

Eric Salzman is a writer and composer. Much of his writing deals with nature and the environment.

California's Water

The California Water Atlas, William L. Kahrl, Project Director and Editor; Published by the State of California, 1978 and 1979. Cloth: \$39.86; California residents add \$2.39 sales tax. Available from: William Kaufmann, One First Street, Los Altos, CA 94022.

Essays on Land, Water, and the Law in California, by Paul S. Taylor; The Arno Press, New York, reprint edition, 1979. Cloth, \$35.00.

MARC REISNER

"HOW DID this book come to be published?" one feels compelled to ask after leafing through *The California Water Atlas*. Why did the State of California spend more than half a million dollars on a book about water? And not only that, why produce not merely a book, but a work that approaches art?

Well, why not? There was a time when governments built beautiful buildings, elegant bridges and stately monuments; now a state government has produced another sort of monument, a published monument, that is as durable and praiseworthy as any of the public works of another era.

The California Water Atlas is an impressive example of bookmaking, impressively priced. Visually stunning, the volume is printed on high-quality paper, and the photographs include remarkable, rarely seen historical images and startling present-day views of the state taken from U-2 planes and satellites. The lengthy text is well-written and comprehensive. The book's most remarkable feature, however, is its use of graphic arts to convey an enormous mass of statistical information. The maps and graphs are so

vividly and ingeniously rendered that they surely should win international acclaim.

But what kind of book is *The California Water Atlas*? The question is not easy to answer because there has never been a book quite like it. In its own words, it "sets out to tell the biggest story in the richest and most populous state in the Union." That water is the basis of California's prosperity, as the Foreword asserts, is an understatement; the very character of California as a political and economic entity depends on the transport of huge volumes of water from where it exists, and presumably isn't needed, to where it doesn't exist and presumably is needed. The Los Angeles Basin, where nearly 40% of the state's 23 million people live, has 2% of the natural surface-water supply; the North Coast, with less than 5% of the population, has nearly 40% of the surface water.

After a barrage of geographical, hydrological and climatological facts and figures in the first two chapters that leave the reader slightly dazed, the atlas recounts the role of water use in the settlement of the state. Because many of California's founders were fortune seekers, its early history, though colorful, was one of predation. There was continual fighting, for example, between Central Valley irrigators and the foothills gold miners, whose hydraulic mining filled rivers with debris that created havoc downstream. The irrigators also fought bitterly among themselves.

These power struggles tipped in favor of the people who held the largest tracts of land. California's pattern of a few people owning vast parcels of land was

fostered in two ways. The federal government gave away public land to anyone who stated, honestly or not, that they were reclaiming it. Acquisition was thus made easy. Irrigation of the land was more difficult, but proved cheaper per acre (and profits correspondingly greater) for those irrigating multiple tracts. The discrepancy in relative cost ruined many small farmers, whose parcels were then bought by the large landowners. The managing bodies of irrigation districts and water agencies reinforced the skewed economy, acting as a powerful shadow government throughout California's history.

There are fascinating accounts in the *Water Atlas* of the diking and cultivation of the Sacramento-San Joaquin Delta region, and of the early "water colonies" (communities that built and operated their own water systems), which brought about the permanent settlement of the arid regions. The Hetch Hetchy Dam story is here, told evenhandedly, without emotion. Some readers will be surprised to learn that San Francisco almost built its reservoir at a site other than Hetch Hetchy, until the other site's proponents were implicated in a kickback scandal involving Abraham Ruef, the city's homegrown Boss Tweed. There is also the story, told at some length, of how Los Angeles appropriated the faraway Owens River for its water supply. Other chapters deal with the bitterly contested and over-allocated Colorado River, with the development of the federal Central Valley Project and the State Water Project—the two largest in history—and with the extraordinarily complicated operation of the current water system.

Enough about the text. It is the graphics that make *The California Water Atlas* the remarkable book it is. Most of them are beautiful, many three-dimensional in concept and, except for one utterly baffling diagram depicting the state's hydrologic balance, all are quite comprehensible. Some of the graphics convey at a careful glance what whole books do not teach. For example, one graph shows the entire twentieth-century record of peak stream flows in fifteen California rivers, each river the product of an hydrologic microregion. The flow levels are measured in vertical columns, with shades of color supplying detail—the 5-year floods, 100-year floods and so on. The columns representing the North

First time ever in a bird guide—full-color
identification photos of every North American bird!

Take 2 Audubon Society Bird Guides

in matching snap case (regular price \$19.90)

for only \$2.95

when you join Nature Book Club



NATURE BOOK CLUB

P.O. Box 2026, Latham, N.Y. 12111

Please accept my membership in Nature Book Club, as described in the accompanying announcement, and send my two Audubon Society Bird Guides in matching snap case (1097) regular price \$19.90. Bill me later for just \$2.95 plus

delivery and handling. My only obligation is to buy just two more books within the next year at members discount prices (plus a modest charge for delivery and handling).

*This offer valid only in the U.S.A.
and Canada and only for new members.*

N/SO1R

Name (please print) _____

Address _____

City _____ State _____ Zip _____





NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY CARD

FIRST CLASS

PERMIT NO. 170

LATHAM, N.Y.

POSTAGE WILL BE PAID BY ADDRESSEE

NATURE BOOK CLUB

P.O. Box 2026, Latham, N.Y. 12111





1,211 spectacular photographs of all North American birds in realistic full color!



At last, **NATURE BOOK CLUB** a club custom-designed for people who want to explore and enjoy the natural world, in books of rare beauty at exceptional savings.

As your introduction to Nature Book Club...
**Take these 2 new
AUDUBON SOCIETY
BIRD GUIDES**
with matching snap case
for only \$2.95
(published at \$19.90)



You'd never expect bird guides to show up on **The New York Times** best seller list. Yet these did, for many weeks. Perhaps because they're so beautiful, so useful. And absolutely unique, in two essential ways.

Ordinary guides arrange birds by ornithological family. Without prior knowledge of bird families and species, you're left pretty much in the dark when it comes to identification. But these Audubon Society Guides arrange bird pictures in groups by **appearance**. So you simply check what you've seen—and find your bird fast.

Another thing. These are the **first and only** guides to show birds in superb full-color photographs rather than conventional paintings. The camera sees exactly what you would see in the field: the natural color and stance of the bird in its natural habitat. You'll find a total of 1,211 spectacular full-color photographs in the two volumes, and they make identification wonderfully easy. But even if you never go birdwatching, these books are destined to be among the most treasured in your nature library.

In the months ahead, you'll be offered a choice of fine nature books like these—all at member discounts as high as 50% (sometimes more).

How your Club membership works: About every four weeks (14 times a year) you will receive a Club bulletin describing the main selection and alternate books also available. If you want the main selection only, you need do nothing—it will be sent to you automatically. If you don't want the main selection or want alternate books, or no books at all, simply indicate your wishes on the form that comes with the bulletin and return it by the date specified. Club mailings are carefully scheduled to assure you of at least 10 days in which to do this. But in the unlikely event that you don't have 10 days, and you receive an unwanted selection, you may return it at our expense. Your only obligation is to buy two more books within the coming year and you may cancel your membership any time after that, if you wish. To retain all membership benefits, you need take only one book a year thereafter (all books are offered at low member prices plus a modest charge for delivery and handling).

Enjoy Substantial Savings. The two Audubon Society North American Bird Guides were published at \$19.90. Yet both—with matching snap case—are now yours for only \$2.95, to introduce you to Nature Book Club. As a member, you'll be offered a varied selection of important new books covering all aspects of nature: animals, birds, plants, fish, minerals, wilderness places, camping, exploration, natural history, science—intriguing subjects of timely and enduring interest... colorful, informative books you'll turn to again and again, and be proud to own.

As a Nature Book Club member, you'll be able to buy all Club books at discounts of up to 50% and sometimes even more. Yet in virtually every case, Club books are identical to publishers' editions—same jacket, binding, cover, paper, printing—same everything except price. So join us now while our generous introductory offer is still in effect. **Mail the postpaid card today!**

SEND NO MONEY NOW. To receive your 2-volume Audubon Society Bird Guide set with matching snap case, mail postage-paid card today. If card is missing, write to: NATURE BOOK CLUB, P.O. Box 2026, Latham, N.Y. 12111.



Coast's Eel and Klamath rivers, viewed next to the columns representing the Kern and the Los Angeles (which flow through agricultural and urban regions where demand for water is greatest) appear as skyscrapers overshadowing tiny houses. Immediately one understands why Southern California wants to get its hands on the Eel, a virtually undammed and normally tranquil little stream that, during rainy North Coast winters, has twice carried more water than the Mississippi River.

Another chart shows what crops grow where in California. Grids of brightly colored tiny squares cover a map of the

major agricultural regions of the state; each color corresponds to a crop, and each square represents 5000 cultivated acres. In the San Joaquin Valley, where the groundwater supply is being drafted in enormous quantities, the two chief crops are alfalfa and irrigated pasture. Of the 200 crops grown in California, the two requiring the most irrigation (after rice) are, not surprisingly, alfalfa and irrigated pasture.

Another colorful graphic tells even more about the groundwater "overdraft" by comparing irrigation methods, region by region. In the San Joaquin Valley, the two most common methods by far are

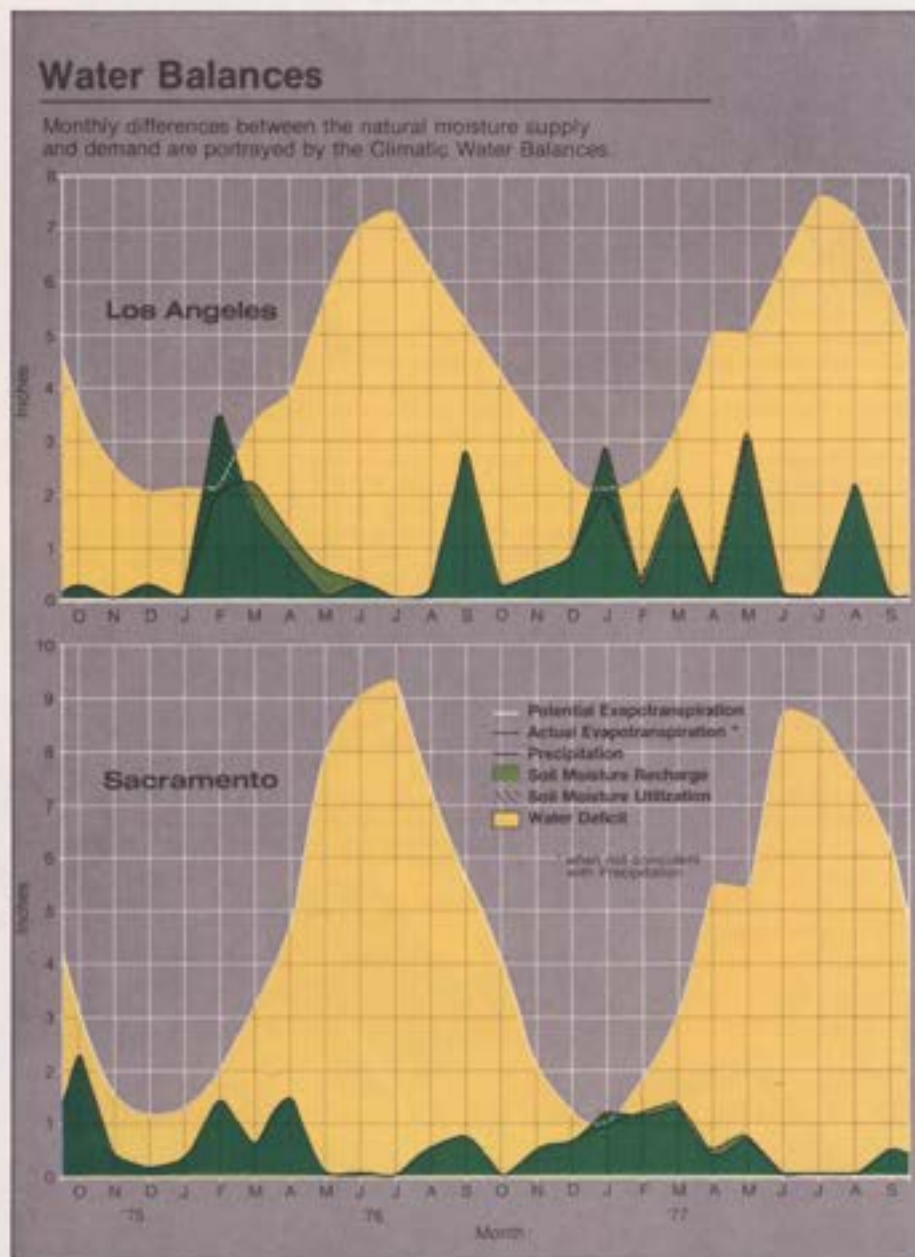
flood and furrow irrigation—also the two least efficient. Irrigators can afford such waste of water only because groundwater pumping is not controlled, and because the federal government sells surface water for less than a penny a ton. Groundwater regulation, says a San Joaquin Valley legislator, is "World War Four for farmers," and establishing standards for irrigation efficiency and controls over crop patterns are presumably the Apocalypse. But here at least we have two lucid graphics showing why the groundwater overdraft in the San Joaquin Valley is so severe.

What are the greatest sources of water pollution around San Francisco Bay? One chart presents an imaginative landscape of three-dimensional towers representing the pollution rising from industrial, power and sewage-treatment plants in the Bay Area. Where does all the state's water go? Two full-page diagrams show the end uses of water in the state and federal projects: fat and thin green arrows, according to volume, head off toward agricultural and urban users all over the state map.

A book that makes California's water systems comprehensible yet is beautiful enough to leave on a coffee table is a bargain at less than \$50. Only 11,000 were printed, and they are selling extremely well; those who wish to purchase copies had better request them in a hurry.

The only weakness of *The California Water Atlas* is also one of its strengths: its insistence upon impartiality. Fair is fair, of course, but on some issues reason compels favoring one side. By refusing to choose, except perhaps choosing Governor Jerry Brown's side on water-project construction, the atlas makes at least one burning issue seem a matter of routine controversy and honest disagreement: this is the Reclamation Act's acreage limitation and residency requirement.

The Reclamation Act, which created the Bureau of Reclamation and is responsible for most of the federal water development in the West, says in language too clear to be misinterpreted that no one person shall receive irrigation water from the bureau for more than 160 acres, and that the landowner must live on or near the irrigated land. The two restrictions, however, have existed chiefly on paper. Many Central Valley farmers today live in Los Angeles or San Francisco and,



through a number of clever tactics devised to evade the law, irrigate thousands of acres with cheap federal water. What is more, no real effort has been made by the federal government to enforce the restrictions, and there has been at least one direct and successful effort by a Secretary of the Interior to exempt large landowners from the acreage rule.

The water atlas sums up this situation with the comment: "The Bureau of Reclamation has been criticized at various times and in different quarters for being either too lax or too vigorous in its efforts to enforce the restriction." There were brief spasms of enforcement during the Roosevelt and Truman administrations and during the early days of the Carter Administration, but mostly it was all sound and fury, signifying nothing. The Department of the Interior has been lax in its enforcement of the law, and when the department has attempted action it has been pressured by western legislators from agricultural areas.

The controversy over water-user restriction is addressed with a quiet but unflinching sense of outrage in Paul Taylor's book, *Land, Water, and the Law in California*. Taylor, an internationally known agricultural economist and a semi-retired economics professor at the University of California, Berkeley, belongs in the company of Aleksandr Solzhenitsyn and Simon Wiesenthal; he is one of those people who will not let us forget. His has been the only sustained effort for enforcement of the acreage limitation and the residency requirement of the Reclamation Act. Had these restrictions been heeded at all, the act could have been one of the most effective land-reform and community-development measures in our history. The whole pattern of agricultural land development, as Professor Taylor points out, might have been very different; instead of absentee landowners on Nob Hill and the drab little towns that exist in the Central Valley, there could have been smaller farms, more vibrant communities, and certainly there would have been opportunities for thousands more settlers.

These opportunities, however, were squandered. The water flowed toward the money, and the Reclamation Act became not a reform measure, but welfare for the rich. And it all gets worse. Yet subsidized federal water is so critical to agriculture in the West, and western agriculture's

money is so critical to politicians, that such liberal senators as Frank Church and Alan Cranston are trying to expand the acreage limitation to 1280 acres, eliminate the residency requirement altogether, and exempt the Imperial Valley, the Mormon Church, and much of the San Joaquin Valley from even these pitiful "restrictions."

Professor Taylor's book, a collection of his papers and law-review articles, methodically documents the 40 years of abuse of the reclamation laws. In a long chapter on the California Water Project, Taylor convincingly argues there was a "major effort on the part of large landowning interests within the state to cir-

cumvent national water policy."

Professor Taylor, now in his 80s, may live to see the Reclamation Act made into a caricature of the reform intended. The Westlands water contract negotiated by the Carter Administration (whose gradual cave-in to western water interests is now almost complete) violates the act in spirit, if not in law. The Church bill to "relax" the Reclamation Act stands at least a reasonable chance of passing, and Senator Cranston wants to relax it even further. It is a sorry spectacle. □

Marc Reisner is an Alicia Patterson Journalism Fellow, studying water and its role in the development of the American West.

Regulating Pesticides

The Pendulum and the Toxic Cloud: The Course of Dioxin Contamination, by Thomas Whiteside; Yale University Press, New Haven, 1979. Cloth, \$15; paper, \$4.95.

The Least Is Best Pesticide Strategy: A Guide to Putting Integrated Pest Management into Action, edited by Jerome Goldstein with Rill Ann Goldstein; The JG Press, Emmaus, Pennsylvania, 1978. Cloth, \$12.95; paper, \$6.95.

ODOM FANNING

WHAT HAVE we learned in the eighteen years since *Silent Spring* was published? Then, Rachel Carson wrote: "We have subjected enormous numbers of people to contact with these poisons [chemical insecticides], without their consent and often without their knowledge. If the Bill of Rights contains no guarantee that a citizen shall be secure against lethal poisons . . . it is surely because our forefathers . . . could conceive of no such problem."

Well, what have we learned since Carson made her eloquent plea for pesticide sanity? It is easier to say what we have done. The chemical industry has produced thousands of new compounds and sold them in prodigious amounts, more than \$2 billion worth a year. People use millions of applications annually, to control agricultural, disease-carrying, and household and institutional pests. Their chemical cousins, herbicides, are sprayed

with equal indiscrimination to destroy broadleaf vegetation in commercial forests and along highways and powerlines. One herbicide alone, 2, 4, 5-T—which the military called Agent Orange—was sprayed over almost 5 million acres of South Vietnam between 1962 and 1970, to defoliate the dense jungles.

Even toxic clouds have silver linings, and no one can deny the record of, say, DDT in controlling malaria and typhus. The problem is that such chemicals, even in beneficial use, are far from benign. They are often poisonous to unsuspecting people who have no way of knowing what they have brushed against, breathed in, or swallowed.

Today, as in 1962 when *Silent Spring* appeared, powerful economic and political forces try to discount the dangers and emphasize the benefits of chemicals, insisting that the protection of crops requires any means available. But despite these pressures, the press and the regulatory agencies occasionally serve the public interest. For example, in one recent two-month period:

- The Environmental Protection Agency, rejecting the advice of its scientists, reapproved the "emergency" use in Mississippi of an insecticide containing mirex to control fire ants. When the media disclosed research indicating that the chemical breaks down into a compound 10 to 100 times as toxic as mirex, EPA reacted angrily to the publicity. Incredibly, it had not even known about the re-



Enter the world of Questers nature tours.

When you travel with Questers, you have the advantage of our knowledge of the travel world. And our experience of the natural world. We are travel professionals. And our only tour program is Worldwide Nature Tours. You get reliable arrangements and expertly planned itineraries.

Under the leadership of an accompanying naturalist, we search out the plants and animals, birds and flowers...rain forests, mountains, and tundra...seashores, lakes, and swamps of the regions we visit. At the same time, we explore the more usual attractions in touring—the cities, archaeological sites, and people.

Where can you go with Questers? Virtually anywhere in the world. The current Directory of Worldwide Nature Tours describes 29 tours varying from 9 to 30 days. Following is a representative listing:

Worldwide Nature Tours 1980 Departures (Partial Listing)

The Americas

EVERGLADES: 11 days, April 3 & Nov. 6 • HAWAII: 15 days, Feb. 10, April 6, July 13, Oct. 5 & Dec. 21 • ALASKA: 17 days, June 7 & 21, July 5, 12 & 26, & Aug. 9 • NORTHWEST CANADA: 19 days, July 5 • GUATEMALA: 19 days, Jan. 26, Feb. 16, Nov. 1 & Dec. 20 • THE AMAZON: 16 days, Jan. 24, May 15, July 10, Aug. 7, Oct. 16 & Nov. 13 • ECUADOR & GALAPAGOS: 15 days, Jan. 24, March 6, May 8, July 10 & 31, & Oct. 2 • PERU: 23 days, April 5, June 7, July 19 & Nov. 1 • TRINIDAD & TOBAGO: 11 days, March 10 & Nov. 10.

Europe

ICELAND: 16 days, June 13, July 4 & Aug. 8 • ISLANDS & HIGHLANDS OF SCOTLAND: 23 days, May 30, July 11 & Aug. 22 • GREECE: 23 days, April 11 & Sept. 19.

Asia and Africa

THE HIMALAYAS: 23 days, March 13 & Oct. 9 • KASHMIR & LADAKH: 23 days, July 4 & Sept. 5 • NORTHERN INDIA: 23 days, Feb. 23 & Nov. 22 • SRI LANKA: 18 days, Feb. 22 & Nov. 21 • KENYA: 23 days, Jan. 31, July 24 & Oct. 23.

Oceania and Australasia

AUSTRALIA & NEW ZEALAND: 30 days, Feb. 2 & Sept. 20 • NEW ZEALAND'S MILFORD TRACK & COOK ISLANDS: 23 days, Feb. 22 & Nov. 14.

For a complimentary copy of the newest Directory of Worldwide Nature Tours outlining the entire program, write to Questers or see your Travel Agent. If you are interested in a specific tour, request the Detailed Itinerary. Exploratory expeditions and special tours are announced from time to time in our newsletter Nature Tour Notes, sent free to all on our mailing list.



QUESTERS

Questers Tours & Travel, Inc.
Dept. SA180, 257 Park Avenue South
New York, N.Y. 10010 • (212) 673-3120

search; at least temporarily, the agency has retracted its approval.

• The General Accounting Office, Congress's auditors, asked the Department of Defense to survey Vietnam veterans to identify those who might be suffering from long-term exposure to 2, 4, 5-T. GAO said 450 veterans had claimed illness caused by this herbicide.

• After a year of intensive study of 2, 4, 5-T, the EPA announced the emergency suspension of most uses of the chemical. The most damning evidence against it came from a small group of Oregon women who, after exposure to the herbicide, had suffered miscarriages at three times the national rate. (Dow Chemical Company, the principal producer of 2, 4, 5-T, denied a problem existed and went to court to overturn the suspension.)

The most concentrated exposures are suffered by industrial workers who apply insecticides in the fields. Periodically, the public gets a massive dose of a toxic chemical by accident. Industrial accidents involving 2, 4, 5-T are known to have happened in Missouri and West Virginia, as well as in West Germany, the Netherlands, Czechoslovakia and England.

The Pendulum and the Toxic Cloud is a popular case history of one of the most devastating accidents. On July 10, 1976, at a chemical plant near the town of Seveso, Italy, an explosion threw out a cloud containing dioxin, the extremely poisonous contaminant associated with 2, 4, 5-T. When this toxic cloud settled over 700 acres inhabited by 5000 people, a minor industrial accident turned into a major environmental disaster.

Nobody who had responsibility comes off well in Thomas Whiteside's account of the aftermath. The chemical company (ICMESA) misled authorities about the seriousness of the matter and waited two weeks before acknowledging there had been enough dioxin contamination to warrant evacuating those closest to the plant. Political and health authorities gave confused signals to one another and to the public. Clean-up efforts were mishandled.

The social and health consequences were tragic: 739 people were uprooted from their homes for as long as a year and a half; chloracne (burn-like skin lesions) was common, and particularly affected children; and the fear of fetal malformations led many women to obtain the



FREE

Complimentary issue of a
Nature Book Review

New monthly magazine
reviews current and non-
current nature books
and contains updated
mail order book service.
\$5 brings you a one-year
subscription and a FREE book.
Order Now!

ORION NATURE BOOKS
Box 420K, Gt. Barrington, MA
01230

ANNOUNCING BED & BREAKFAST HAWAII

Would you like to be part of a new island network of travelers who receive overnight accommodations and aloha breakfast in private homes for reasonable rates. For more information regarding membership, write to:

BED & BREAKFAST HAWAII
P.O. Box 449, KAPAA, HI 96746

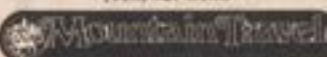
ANDEAN TREKKING 1980

ANDES, INCAS & AMAZON
Peruvian mountain-to-jungle hike
6/29 - 7/23, 1980

HIGHLANDS OF BOLIVIA
Traversing the Andean altiplano
6/6 - 6/28, 1980

MOUNTAINS OF ECUADOR
Climbing snow-capped tropical volcanoes
11/28 - 12/17, 1980

Our expeditions feature very small groups, experienced leaders, and unusual off-the-beaten path itineraries. Write for 72-page 1980 CATALOG describing more than 100 adventures on 6 continents.
1398-SC Solano Avenue • Albany, Ca. 94706
(415) 827-8100



Catholic Church's permission for therapeutic abortions.

No one knows what long-term consequences to expect from the widespread use of 2, 4, 5-T. Biologists are deeply concerned that residues appear to have entered the human food chain. There is accumulating evidence that dioxin is a carcinogen, and that it can cause liver damage, birth defects and miscarriages.

The Pendulum and the Toxic Cloud is an interesting and provocative account based on Whiteside's investigations, including two visits to Seveso. It is, finally, an earnest plea for caution, conservatism and control in the use of all chemicals.

Like Rachel Carson, Jerome Goldstein recognizes that pesticides sometimes are necessary. But, he argues, they should be used only when better ways of controlling pests have failed. The "best" way is the one advocated in *The Least Is Best Pesticide Strategy*—Integrated Pest Management. IPM involves a balance of biological, cultural, physical and genetic controls, with heavy emphasis on monitoring pest populations. IPM is aimed at the control of many pests, among them aphids, corn borers, flies, fruitworms and mosquitoes, as well as certain weeds and plant diseases. Farmers and operators practicing IPM apply chemicals only when they are necessary to prevent economic damage to crops. According to those practicing it, IPM works effectively on alfalfa, apples, cereals, citrus fruits, corn, cotton and other crops, and on pine forests.

Most farmers still cannot resist the now-traditional farming methods advocated by farm journals, advertising, pesticide labels, agricultural chemical dealers and extension agents. Yet Goldstein reports many farmers who changed their methods are successful; of 300 organic farmers studied, 60% reported no drop in income when they farmed without pesticides or synthetic fertilizers. Among nineteen advantages of organic farming they mentioned were lower production costs, higher net income and lower energy consumption.

Goldstein's book includes information of particular interest to young people, such as a chapter on preparing for a job in IPM, and there is a chapter on what consumers and policy makers should know about IPM. □

Odom Fanning is a writer living in Washington, D.C.

The SIERRA CLUB of BRITISH COLUMBIA'S



Bella Coola Valley, British Columbia, Canada

Dennis and Katie who live at Talchako year-round invite you to explore with them some of the million hectares of mountains, glaciers, lakes, and tundra that make up one of Canada's most wild and scenic wilderness areas. Join them on backcountry or lodge-based outings and learn and feel what it is to be a part of this vast and varied wilderness. Or, plan your own Canadian Coast mountain vacation at Talchako.

Open May 1st to October 31st. Write for complete information.

Dennis Kuch

Katie Hayhurst

TALCHAKO LODGE

Tweedsmuir Provincial Park

via Box 108, Hagensborg, B.C., Canada V0T 1H0

phone 604-982-2489

(Look for 1980 Sierra Club Outings at Talchako or write for our list of 1980 Talchako Outings)

Natural Sounds

This ENVIRONMENTS series represents a new concept in stereo sound. Each album faithfully captures 60 min. of nature's own music. They can be most useful in aiding activities which require isolation, such as reading, sleeping, concentrating, meditating, or just plain old relaxing.

- disc 4 — Ultimate Thunderstorm
- side 2 — Gentle Rain In A Pine Forest
- disc 5 — Heartbeat
- side 2 — Wind In The Trees
- disc 8 — Wood-Masted Sailboat
- side 2 — A Country Stream
- disc 9 — Pacific Ocean
- side 2 — Caribbean Lagoon
- disc 10 — English Meadow
- side 2 — Night In The Country
- disc 11 — Winter Blizzard
- side 2 — Country Thunderstorm

\$8.75 ea. (postage paid)
MasterCharge & Visa accepted
satisfaction guaranteed

60 min. cassettes of the following cuts are also available: Thunderstorm/Wood-Masted Sailboat/Pacific Ocean/English Meadow. \$8.75 each.

REQUEST OUR FREE CATALOG

Alternative Energies Unlimited

8143 (Box T) Big Bend
St. Louis, Mo. 63119

(314) 962-2232 or 961-1069

Dealer inquiries invited.

Early Winters New 1980 Outdoor Catalog FREE



Take this opportunity to send for your free copy of the Early Winters catalog of unique outdoor gear.

The Early Winters Catalog is filled with high-quality, unusual outdoor equipment that'll lighten your load & help make your outdoor trips more enjoyable.

For your big, full-color copy packed with thousands of words of descriptive copy & scores of pictures, send this handy coupon or write today.

Early Winters, Ltd.

110-UP Prefontaine Pl. S., Seattle 98104

□ Please send me your free color catalog of unique outdoor equipment filled with new & exciting items, most of which simply can't be seen or purchased anywhere else.

Name _____

Address _____

City/State/Zip _____

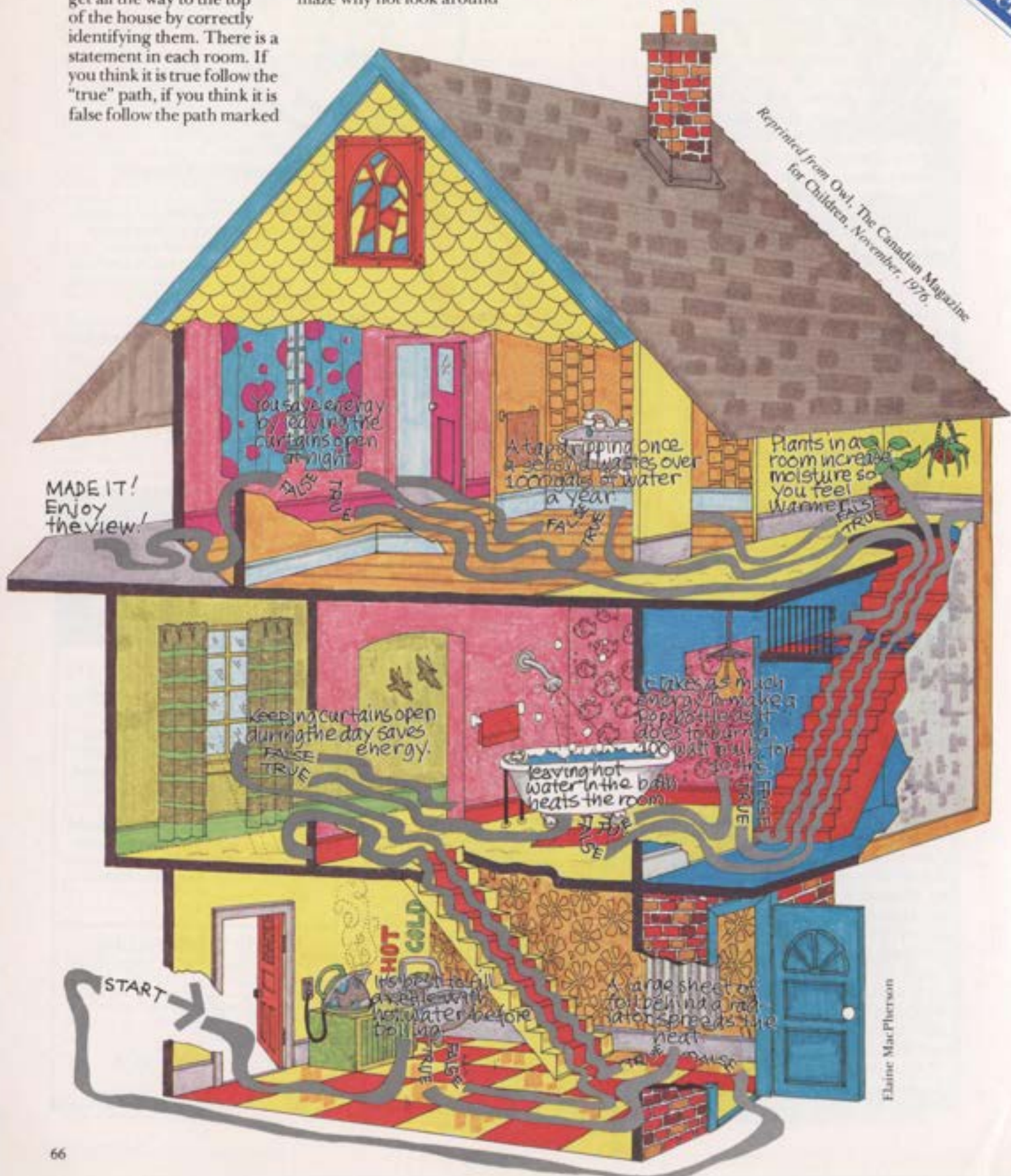
Winter Energy Maze

There are eight places in this house where you can save energy. See if you can start in the kitchen and get all the way to the top of the house by correctly identifying them. There is a statement in each room. If you think it is true follow the "true" path, if you think it is false follow the path marked

"false". If you make a wrong choice go back to where you chose incorrectly and try again. After you finish this maze why not look around

your home and see if you can use any of the tips you've learned to save energy.

Reprinted from Owl, The Canadian Magazine for Children, November, 1976.



Flaine MacPherson



Service Trips

Last August you could have spent ten glorious days at Little Divide Lake in Wyoming's Wind River Range, or enjoyed eight equally invigorating days in the Eagle Cap Wilderness of northeastern Oregon. Or you could have chosen a ten-day outing among the high lakes of the Beartooth Range in southwestern Montana. These three trips were among the 200 or so offered in the 1979 Sierra Club outing catalog. Each was through spectacularly wild territory, yet the fees ranged from \$60 to \$420. The most expensive of the three trips, the one to the Beartooth Range, was a "Highlight Trip," with the bulk of the hikers' gear carried by pack animals. On the Oregon "Knapsack Trip," everything was carried on the hikers' backs—all personal gear, food and equipment—and the cost was \$135. The bargain of the lot, ten days in the Wind River Range, was a "Service Trip"; at \$60, the fee was only \$6 a day.

Why do the trip prices vary so widely? The reasons for the \$420 highlight trip tag are obvious: wranglers and pack horses don't come cheap. The knapsack trip fees also have to cover all costs incurred by the participants. But the service trips are priced below what they cost the Club; they are the only national outings that are not self-supporting. Because of the essential work service-trip participants perform in national park and national forest backcountry, and because of the resulting goodwill for the Club, nearly half of the costs are subsidized by the Sierra Club Outing Committee and by tax-deductible donations through the Sierra Club Foundation. Yet despite the bargain rates in these times of galloping inflation, service-trip rosters sometimes fill slowly. The nature of the trips—or, more accurately, common misconceptions about their nature—may account for some members' reluctance to sign on.

A part of the Club's outing program for twenty-two years, service trips are essentially organized work parties in the wilderness. Participants restore fragile wild areas, remove litter, and build and maintain trails. "You mean you *pay* to do this?" is the usual response to Coloradan

ROBERT A. IRWIN

Jim Bock when he tells people about service trips. It's not only the work and camaraderie he enjoys—the food, he says, keeps you happy and primed for productive labor.

Californian Dave Simon, who has led service trips in the Tetons and Sierras, heartily echoes Bock's enthusiasm. The trips allow plenty of time to enjoy the wilderness. No one is pushed. And despite the leisurely pace, much work is accomplished—there is the reward of doing something tangible for the environment.

Simon wants to rid the service trips not only of a "chain-gang" image, but also of the mistaken notion that they are mainly for gung-ho high-school or college youth. Vigorous people of all ages are needed. The adult participants can become less-transient trip leaders, thereby giving the program continuity. As treasurer of the Service Trip Subcommittee of the National Outing Committee, Simon is acutely aware that one of the subcommittee's major expenses has been the yearly training seminar for new leaders. If the rapid turnover of trip leaders were reduced, the heavy training expenses could also be cut.

Pledges and Deficits

The twin problems of service trips' image and a favorable balance of participants' ages have bedeviled the program for years, but this year the major problem is money. Twenty national service trips have been tentatively scheduled; the cost of running them totals \$37,000, which includes the cost of training. Anticipated revenue from the trip fees (an average of \$65 per person) plus small contributions from the federal parks and forests was estimated at \$20,000; this leaves the program with a \$17,000 deficit. The National Outing Committee originally pledged \$7000 to its service trip program. Then the committee upped its pledge to \$10,000. The remaining \$7000

deficit was budgeted to come from tax-deductible funds donated to the Sierra Club Foundation in support of service trips. But the anticipated donations have not come in, nor were they in sight when the Board of Directors met last September.

Virtually everyone in the Club wants service trips to be continued and expanded. But only two further budget remedies exist; either some trips must be cancelled, or trip fees must be increased. If fees for the trips that once were free (except for the sweat and elbow grease exacted from participants) were to be raised much above \$65, many more trips might have to be scrubbed for lack of takers. The current \$65 fee is \$5 above last year's basic \$60. In 1977, the fee was \$55. This year, to make up that \$17,000 shortfall entirely from fees, the basic rate would have to be more than \$100.

Both cancelling trips and raising fees seem self-defeating—the realistic solution would be to find donors. The donors most needed are those willing to give on a continuing basis, because the major difficulty in the raising of funds for service trips is having to start from scratch each year.

Ideally, the Sierra Club Foundation would like to build up a kitty of about \$10,000 in cash and pledges during the year *before* the scheduled trips. This year, Foundation Executive Director Nicholas Clinch believes that somehow enough money will be scratched up to pay for most, if not all, the service trips. In the meantime, he would welcome suggestions of strategies and of potential donors—individuals, businesses, foundations, institutions, and any other likely source of funds. You can get in touch with Nick Clinch at the Sierra Club Foundation, 530 Bush Street, San Francisco, CA 94108.

Three service trips are exempt from the possible cuts—the trips run by outing subcommittees for the Northeast, the Southeast and the Southwest. These regional subcommittees are sponsoring service trips to the Long Trail in Vermont, to Shenandoah National Park in Virginia, and to the Superstition Wilderness in Arizona. All three outings are

FOR COLD DAYS



Acts like an extra pair of mittens, a warm pair of socks. Rub Frost-Guard on skin before going out in the cold.

REYNES PRODUCTS, INC.

Box 1203, Sonoma, Ca. 95476

Available at Sporting Goods, Ski Shop, and other fine stores. — Dealer Inquiries Invited —

AUTHORS WANTED BY N. Y. PUBLISHER

A well-known New York book publisher is searching for manuscripts worthy of publication. Fiction, non-fiction, poetry, juveniles, travel, scientific, specialized and even controversial subjects will be considered. If you have a book-length manuscript ready for publication (or are still working on it), and would like more information and a free booklet, please write:

VANTAGE PRESS, DEPT. PK

516 W. 34th St., New York, N. Y. 10001

How to Argue and Win!



Here is a clear simply written basic guide to logical thinking, showing how to spot the fallacies, the prejudices and emotionalism, the inappropriate analogies, etc., in the other fellow's argument and how to watch for and avoid the irrational in your own judgements. The author makes plain not only how but also why people resist facing the truth.

A tool for clear thinking as well as convincing others.

ORDER NOW:

THE ART OF ARGUMENT, by Giles St. Aubyn
\$7.95 plus 95¢ handling charge. 10-day Money-Back Guar.
EMERSON BOOKS, Inc., Dept. 704-E
Buchanan, N. Y. 10511

ADVENTURES WITH AN ISLAND.

Isla Providencia — remote grass-roots Caribbean snorkel coral lagoons with lobster divers. Accompany fishermen in dugout canoes, farmers in volcanic hills, sailing races, music fiestas. Island self-sufficiency versus "modernization". Powerfully-unique, beyond-classroom experience.

An Island is the WORLD in-miniature.
College students: JUNE 2-weeks. Details NOW.
Beneath-the-Surface Box 707 New Milford CT 06776

WHALES



AFRICA

- Wilderness trips to whale breeding grounds: Mexico, Canada, Hawaii
- African Wildlife Safaris: Kenya, Rwanda, Zaire, Zambia
- Natural History Expeditions: Andes, Amazon, Galapagos

ADVENTURES INTERNATIONAL

4421-B Albert St., Oakland, CA 94619
(415) 531-6564

open to any Sierra Club member anywhere.

Dave Simon would like to see service trip sponsorship adopted in more regions. They need not be run only on federal land, which is less extensive east of the Rockies; other locales such as Maine's Baxter State Park, with Mt. Katahdin as its centerpiece, and New York's 2-million-acre Adirondack Forest Preserve are prime possibilities—each has national appeal. New trips are best planned and organized by people who know the territory, says Simon.

The outings programs of many chapters and groups already schedule a variety of short service trips—building and maintaining trails, cleaning up stream banks and beaches, planting trees or restoring meadows and prairies. If you would like to initiate service trips in your group or chapter, request the information packet on how to (and how not to) do it from the Service Trips Subcommittee, c/o Dave Simon, 1247-S Henderson Ave., Sunnyvale, CA 94086.

Lecturers Wanted

The Sierra Club Mountaineering Committee is developing a source file of lecturers on mountaineering located throughout North America. Many Club chapters ask the committee to recommend people capable of presenting dramatic, vivid programs. *Sierra* readers interested in being included in this source file should send a brief synopsis of their presentations, name, address, phone number and fee expected to: Sierra Club Mountaineering Committee, Box 262, La Canada, Ca 91011.

Ski Trail Rewards

On the ski trails last summer? Yes, that's where some hardy members of the North Star Chapter's Wasioja Group could be found—but with axes, shovels and brush hooks instead of skis. The group has participated in the Minnesota Grant-in-Aid Ski Trail Program since 1975 by opening, improving and maintaining two trails (Silver Creek and Oxbow-Mantorville) in southeastern Minnesota. The state pays 65% of the costs, including labor, out of unrefunded gas taxes—money the group has used to pay for brush-cutting equipment and to put into its treasury.

Owning British Columbia

British Columbian Sierra Club members have suddenly become part owners of some of the largest timber, gas and oil operations—and environmental despoilers—in their province. The Western Canada Chapter has acquired voting shares in the British Columbia Resources Investment Corporation (BCRIC). Last March, when the conservative, business-oriented Social Credit Party government of the province offered free BCRIC stock to every Canadian citizen who had lived in British Columbia for at least a year, two imaginative Club members spotted a stock-prospectus provision that would allow the Club a voice in the corporation's deliberations. The provision's usefulness occurred simultaneously to Robert Miles, chapter secretary, and to Jim Bohlen, a founder and past chairman of the chapter.

According to Bohlen, the stock giveaway is a wily, Adam Smith-style strategy to induce people to feel a vested interest in BCRIC. Canadians should then, the reasoning goes, favor corporate expenditures for unprofitable "frills"—such as pollution control and resource protection. Miles and Bohlen found that when shareholders qualify to vote, they also may speak at shareholder meetings, arguing any view they wish.

The BCRIC, established in 1976 when the Social Credit Party came to power, is the successor to a province-run corporation set up during the 1973-1975 recession to rescue floundering timber, oil, gas and other basic industries. Under the corporation's free-stock scheme, all one had to do to get five unregistered, nonvoting BCRIC "bearer shares" was to apply for them in late summer. The bearer shares could then be registered, or converted to voting shares, by accumulating 100 of them in either of two ways: Shares could be bought for \$6 apiece or "aggregated" by 20 Canadians under one name.

The chapter's quarterly newsletter aired Miles' and Bohlen's brainstorm under the headline, "Sierra Club Take-over of B.C. Resources Development Imminent!" The response was generous; the Western Canada Chapter now qualifies to air its environmental views at BCRIC stockholder meetings and to vote 100 shares. □

WILDERNESS BOOK SERVICE

Suppliers of books & maps on wilderness & wilderness activities. We also offer personalized expedition research service. Free catalogue. (10% discount on Sierra Club books to club members.)

P.O. Box 979 Port Hueneeme, Ca. 93041
(805) 487-2322

Explore Guatemala/Peru

Two week Hiking, Canoeing & Backpacking explorations of the natural wonders, remote archaeological sites and diverse cultures of these extraordinary countries. Small, professionally guided tours from February through August.

High Country Passage

P.O. Box 1100-SC, Hamilton, MT 59840
(406) 363-2555 or 363-1820



SCOTTISH HIGHLANDS

Adventure and wildlife vacation program includes backpacking and hill walking as well as less energetic wildlife/wedding trips. Tours also to Orkney, Shetland and Iceland. For illustrated brochure write by International Airmail to: *Caledonian Wildlife Services, 2 Kingsmill Gardens, Inverness IV2 3LU, Scotland.*

5-Day intensive workshops in:

WILDFLOWER IDENTIFICATION • BOTANICAL PHOTOGRAPHY • SUMMER BIRDS • PLANT COMMUNITIES • BACKPACKING • CONSERVATION ISSUES • MANAGEMENT PROBLEMS... and MORE.

Contact:

SMOKY MOUNTAIN FIELD SCHOOL
University of Tennessee, 2036 Lake Avenue
Knoxville, Tennessee 37916
Co-sponsors the Great Smoky Mountains National Park

A DO-IT-YOURSELFER'S DREAM

Bareboat cruises — Florida/Bahamas

- you gather the group; we'll help with the rest
 - suited to interest groups or vacationers
 - 65' motor-sailing Ketch — capacity: 17
 - LOW COST
 - because you sail, cook, etc. with help of captain
- Write or call: WINDWARD BOUND, 1535 Snapfinger Road, Decatur, Ga 30032 (404) 288-1259

HIMALAYA WILDERNESS TREKS

— MORE THAN MOUNTAINS —

Physical & Cultural Quests to the Roof of the World
KASHMIR, LADAKH, NEPAL, SIKKIM, BHUTAN

Write or call for our brochure

HIMALAYA, 30036 Franklin, San Francisco CA 94102 415/441-0202

BIKE EUROPE

Meander from castle to castle on the backroads of the real Europe. Two week tours with hotels and escort vehicle.

GERHARD'S BICYCLE ODYSSEYS
1137 S.W. Yamhill St. (503)
Portland, Ore. 97205 223-5190

The Islands of Hawaii - Naturally July 7-24, 1980

Explore the environment and ecology of Maui, Kauai, Hawaii and Oahu. See the Hawaii most tourists miss. College credit available.

For free brochure: Field Studies in Natural History, Dept. C-1, San Jose State University, San Jose, CA 95192. (408) 277-3736.

Sierra Club Annual Election

EACH YEAR, the Club's annual Election is held on the second Saturday of April as prescribed by the bylaws. On April 12, 1980, five directors will be elected.

A ballot, information brochure and return envelope (not postpaid) will be mailed by March 1, 1979, to each eligible member. With the exception of junior members (under 15 years), all those listed in the Club records as members in good standing as of January 31 will be eligible to vote. Packets for members living within the contiguous 48 states will be sent by third-class mail; for members living in Alaska, Hawaii, Canada and Mexico, packets will be sent first-class. They will be sent airmail to members overseas.

The nine candidates for directors selected by the Nominating Committee are, in alphabetical order: Betsy Barnett, John Broeker, Helen Burke, Joe Fontaine, Philip Hocker, Robert Howard, Richard Pratt, Peg Tileston and Edgar Wayburn.

The information brochure will contain a statement from each candidate giving pertinent background information and views as to the direction the Club should take, accompanied by the candidate's picture.

If you do not receive a ballot by mid-March, or if you mismark it, write a note of explanation to: Chairman, Judges of Election Committee, Sierra Club, Department E, 530 Bush Street, San Francisco, CA 94108. Enclose the voided or mutilated ballot, if you have it. If addressed any other way, attention to your letter will be delayed. After appropriate checks, an effort will be made to send you a replacement ballot in time for it to be returned by the date of the election. This procedure is under the control of the Judges of Election. Completed ballots are to be mailed to the Election Committee, Sierra Club, P.O. Box 2178, Oakland, CA 94621. They will not be opened until the time for counting.

Lewis F. Clark
Chairman, Judges of Election

COLOR FILM PROCESSING

All printed as 5x7" Enlargements from 35mm, 120 & 220 negative films.
36 exp., \$18.00 16 exp., \$9.00
24 exp., \$12.00 12 exp., \$7.50
20 exp., \$10.00 10 exp., \$6.50
Add 10% for shipping & handling. Send check & films to **TOCKY RUN PHOTO**, 1438 SOM center, Cleveland, OH 44124.

FREE CATALOG

Backpacking and Camping. Low prices: Eureka, Camp Trails, Peak 1

CAMPOR

155 W. Shore
Bogota, NJ 07603

Toll Free 800-526-4784, NJ 201-488-1550

SIERRA WILDERNESS GROUP PACK TRIPS

Cedar Grove Pack Station presents for 1980, 6 all-expense and catered group pack trips to Paradise Valley; East and Reflection Lakes; Woods Lake; and other High Sierra areas. Trips from 4 to 14 days into Sequoia and Kings Canyon Parks. For brochure and dates of group trips:

Tracy & Ann Terzian
2346 N. Highland, Fresno, Ca 93727
(209) 292-6684



707-857-3872

NATURAL SCIENCE CAMP IN CANADA Co-ed, ages 8-14



Serious nature study plus wilderness canoe tripping. Banding birds, collecting minerals, investigating marshes in small informal groups help in understanding the "why" of ecology and conservation.

Camp Blue Heron
Box 5, 511 Morris Place, Shillington, PA 19607

INDIA • NEPAL • SRI LANKA


Book now for our challenging, 82 day, 6800 mile overland expedition. Trek through mountain jungles and isolated regions. Explore ancient ruins, isolated villages, and wildlife sanctuaries. Visit countless temples, palaces, historical sites, monasteries, etc. in more than 25 cities and villages. Includes: Trekking, boating, swimming, bicycling, elephant riding, and more. A unique adventure in backpacking at an economical package price. Reservations July 8 and Nov. 7, 1980. For free brochure, phone 912/337-7286, or write: Stanley Expeditions and Escorted Co., 6070 Telegraph Ave., Oakland, Ca. 94609



The Hot Springs Gazette

P.O. Box 41734
ALBUQUERQUE, N.M.
87116 Dept. A

A PERIODICAL GUIDE TO VARIOUS HOT SPRINGS. Maps and directions. Flow rates and temperatures. 20-30 hot springs per issue. Lured prices. Lovely illustrations. Send \$4 for our two latest issues. We also offer a 40-page list containing raw data on over 1,000 hot springs in the U.S. for \$3. Wholesale rates available on request.



NEWS

An Acid-Rain Strategy

Nearly 800 environmentalists, scientists and government officials gathered in Toronto in November for an international Action Seminar on Acid Precipitation. The purposes of the conference, which was sponsored by the Sierra Club, were to educate the participants about the causes and effects of acid rain (more accurately called acid fallout because it involves both wet and dry precipitation), to examine possible solutions, and to design action plans.

Acid fallout originates with sulphur and nitrogen-oxide emissions from automobiles, coal-fired power plants and smelters. Wind can transport these pollutants hundreds of miles, and they interact with sunlight and water to form sulphuric acid and nitric acid compounds, which fall to earth.

Conference participants agreed on a strategy for combatting the problem. For more information, contact David Gardiner, Conservation Department, The Sierra Club, 530 Bush St., San Francisco, CA 94108.

Humpback Whales on the Run

In spite of widespread interest in protecting whales—especially such endangered species as the humpback whale—the use of motorized vehicles that repel the cetaceans increases. Fewer humpback whales are using Glacier Bay, apparently because of the increasing number of tour boats and cruise ships visiting the national monument. Environmentalists believe the chief culprit to be an exceedingly noisy new ship owned by the Glacier Bay Lodge Company. Humpbacks do come into the bay, but many apparently leave soon afterward. The National Park Service is considering action, but whether action will be taken is unclear.

Meanwhile, Hawaiian conservationists have been working to get the National Oceanic & Atmospheric Administration to establish a marine sanctuary for the humpback whales that seasonally mate and bear young there. Jet skis—which basically are sea-going snowmobiles—operate now in the Kihei calving area, and there is talk of resuming the Oahu-to-Maui hydrofoil service through the Mallea calving area. Establishing a marine sanctuary, Hawaiian conservationists believe, is the only way to protect the whales adequately.

Forest Service Launches New Planning Process

The management of national forests will be determined by an elaborate, multi-faceted planning process at the regional level throughout the country. This process will decide how much wilderness will be set aside, how much land will be clearcut, and

whether trees will be regarded as a renewable resource or cut faster than they can grow back. For information about the planning process and about important forestry issues, send for the first Sierra Club "Forestry Bulletin" from the Campaign Desk (Forestry), Sierra Club, 530 Bush St., San Francisco, CA 94108.

Anti-Wilderness Legislation Introduced

Thomas Foley (D-Washington), chairman of the House Agriculture Committee, recently introduced the most sweeping legislative effort yet to block wilderness preservation. The bill, H.R. 6070, will have active timber-industry backing. The measure would permanently commit many roadless lands to non-wilderness status and would set tight deadlines for Congress's enactment of wilderness proposals.

Spokesmen for several environmental groups called the bill "the most extreme anti-wilderness bill ever put before Congress—an all-out attack on the remaining much-endangered forest wilderness heritage of the American people."

To find out what you can do to help fight this proposal, contact your local chapter or group leader, or Campaign Desk (Wilderness), Sierra Club, 530 Bush St., San Francisco, CA 94108.

Board Adopts Comprehensive Water Policy

The Sierra Club's Board of Directors has adopted a broad water policy covering such issues as stream flows, wild rivers, floodplains and energy generation. Copies of the policy are available from: Conservation Dept. (Attn.: S. Krefting), Sierra Club, 530 Bush St., San Francisco, CA 94108.

Plans to Revitalize Cities

The Carter Administration has designed a policy to curb suburban shopping-center sprawl. The Community Conservation Guidance Policy will channel new development into older commercial areas, requiring federal agencies to promote urban revitalization through their programs. Local governments will have a major role in enforcing the new policy.

The Sierra Club, in its own efforts for the urban environment, has filed suit to force the Army Corps of Engineers to more carefully evaluate the impact on valuable wetlands of a proposed shopping mall in New York state. The Pyramid Company of Utica wants to construct a major regional shopping center in an enclosed mall in New Hartford, a suburb of Utica, New York. But the 115-acre site includes 55 acres of wetlands that are recognized by the state as being important for wildlife, flood control, and recharging the water table. Moreover, environmentalists maintain that the mall would obstruct efforts to revitalize downtown Utica.

SIERRA'S FIRST PHOTOGRAPHY CONTEST

■ Categories

Wilderness: The beauty and drama of natural scenes

Wildlife: Animals, insects, birds and reptiles photographed in the wild

Outdoor Recreation: People enjoying the outdoors and themselves; here's the opportunity to show off your best hiking, skiing, climbing, or other adventure shots

Urban environment: Cities are environments, too; some perceptive photos can highlight their good and bad features

Abstract: The forms, surprises and symmetry of natural objects

■ Submissions

Only original color transparencies and black/white glossy prints are eligible. No more than two transparencies and prints may be submitted in each category, for a total of ten photographs in all. You must include a self-addressed, stamped mailer or envelope if you wish your photos to be returned. Each photograph and transparency must have your name and address on it. On a separate piece of paper, tell us where each photograph was taken.

Send submissions to SIERRA PHOTO CONTEST, 530 Bush Street, San Francisco, CA 94108

■ Eligibility

The contest is open to all amateur and professional photographers. Sierra Club staff and their immediate families and suppliers to Sierra are not eligible. Photos must be taken and owned by the entrant. Previously published work or photographs pending publication are not eligible. Photographs that have won other contests are also not eligible. Void where prohibited by law.

■ Deadline

All submissions must be received by April 1, 1980. Winners will be announced in the July/August issue of *Sierra*.

■ Judging

The photographs will be judged by the Sierra staff.

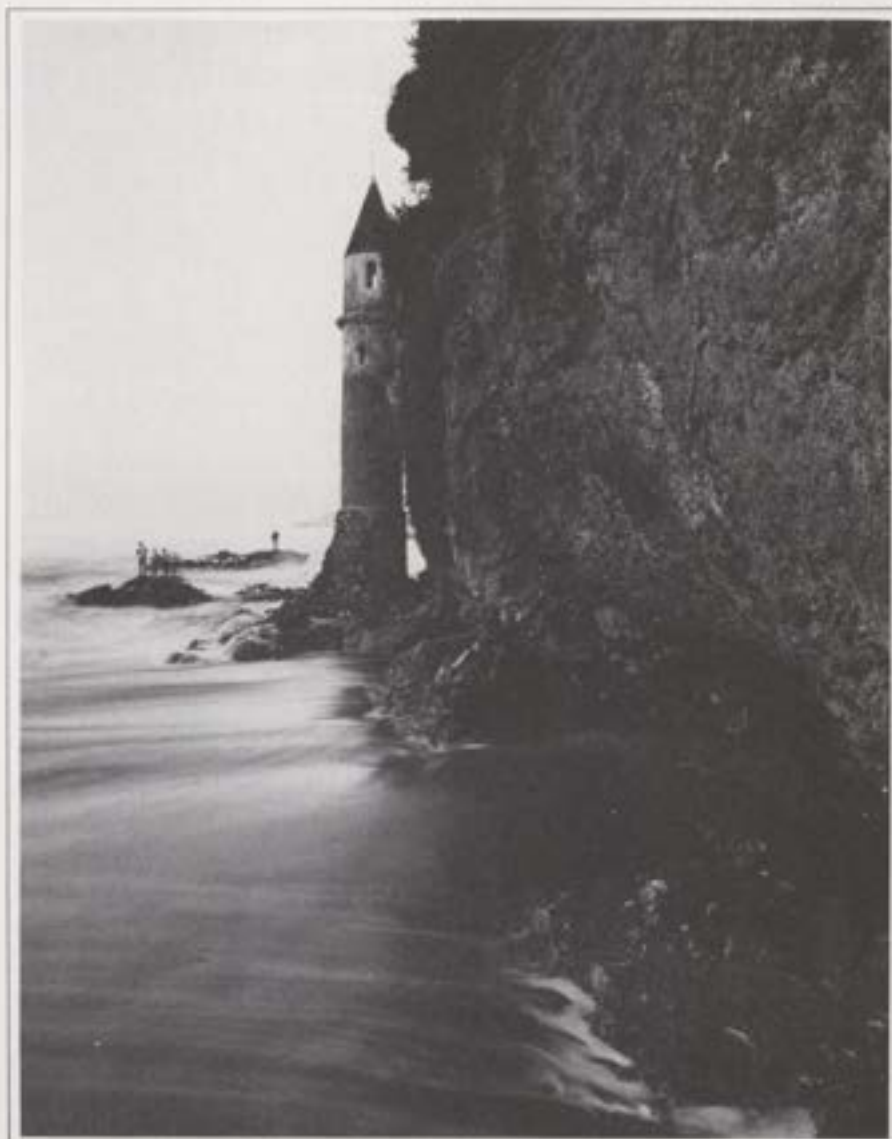
■ Prizes

First, second and third prizes will be awarded in each category, for both color and black/white photography, for a total of 30 prizes. Prizes, ranging in value from approximately \$30 to \$125, include top-quality outdoor equipment such as: expedition packs, day packs, rucksacks, European town packs and duffles.

Each winning photograph will be published in the July/August issue of *Sierra*.

In addition, each prize winner will receive an 11"x14" Deco Wall Plaque reproduction of their winning entries, from Color King of Hollywood, Florida.

Fine photography has played an important role in the environmental movement. Such artists as Ansel Adams, Eliot Porter and Philip Hyde—among others—have contributed much to the preservation of wilderness, the establishment of national parks, the understanding of wildlife, and to the development of the conservation ethic all over the world, all through their wondrous photographs. No less important is that these beautiful works of art also enrich our lives. To honor and encourage the photographers, both amateur and professional, people who continue to celebrate nature, we've now established the Sierra photo contest.





EVERYWEAR
WATERPROOF
WINDPROOF
& BREATHABLE



GORE-TEX[™]
fabrics

W. L. Gore & Associates, Inc.
P. O. Box 1220
Elkton, MD 21921
(301) 398-6400

