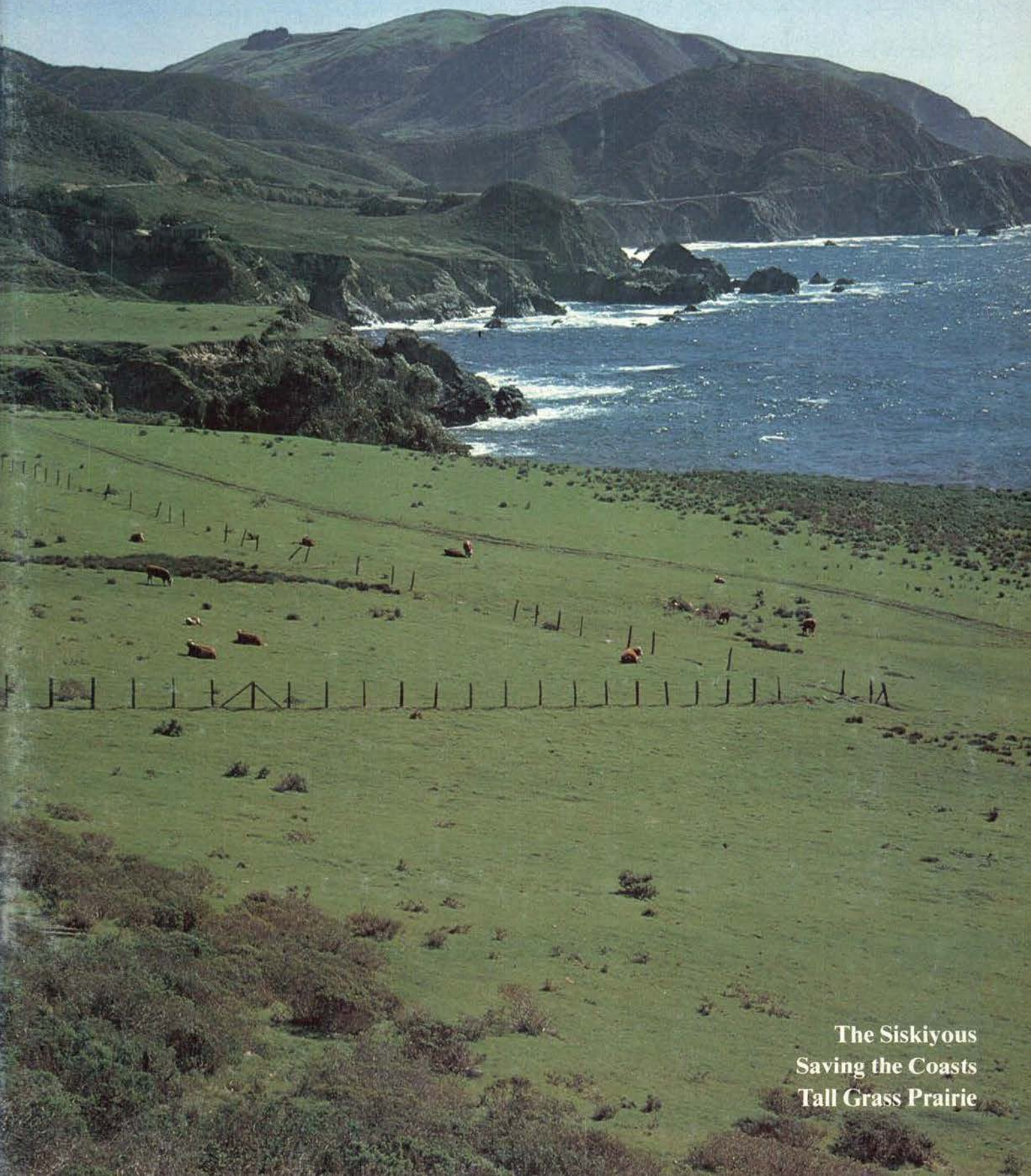


# Sierra Club Bulletin

April 1977/\$1.00



**The Siskiyou  
Saving the Coasts  
Tall Grass Prairie**

# What makes Sierra Club TOTEBOOKS® the best of the pack?

Why are TOTEBOOKS® superior to all other outdoor guides and handbooks — the bestselling books in their field? First of all, TOTEBOOKS® are real wilderness experts. Every one of these handy, jean-pocket sized guides has been prepared by an outstanding authority on its subject, and is crammed with invaluable practical information — on trails, campsites, natural phenomena, even food and photography — presented in clear, easy-to-read type and illustrated with dozens of photographs, drawings, diagrams and maps. Secondly, TOTEBOOKS® are "wilderness tough" — with rounded corners to ensure long life and flexible, weather-resistant bindings. Hardy, versatile and reliable, TOTEBOOKS® have, in fact, no real competition — they're that special. Be sure to take TOTEBOOKS® on your next trip. They'll pull their weight many times over.

## THE CLIMBER'S GUIDE TO THE HIGH SIERRA

by Steve Roper. An all-new guide to climbing over 500 peaks and passes in the most exciting and challenging range in North America. 384 pages. Maps and photos.

## HIKING THE BIGFOOT COUNTRY

### The Wildlands of Northern California and Southern Oregon

by John Hart. 60 carefully chosen trips through three of America's greatest concentrations of mountain wilderness. 35 maps and 16 pages of photos, as well as notes on the geography and natural history of the area to aid the hiker.

## TO WALK WITH A QUIET MIND

### Hikes in the Woodlands, Parks and Beaches of the San Francisco Bay Area

by Nancy Olmstead. A book of suggested walks for those who wish to explore the Bay Area. Each walk (most of them about 5 miles long, with easy grades) offers information about history, plants, animals, general natural history. 192 pages, 30 maps and 32 photos.

## THE BEST ABOUT BACKPACKING

Edited by Denise Van Lear. From a dozen articulate experts — a full pack of advice on backpacking equipment and techniques. 288 pages. Sketches and photos. Appendices.

## STARR'S GUIDE TO THE JOHN MUIR TRAIL AND THE HIGH SIERRA REGION

### Revised TOTEBOOK® Edition

Edited by Douglas Robinson. Twelfth edition in new format with fold-out map and mileage chart.

## FIELDBOOK OF NATURE PHOTOGRAPHY

Edited by Patricia Maye. A practical TOTEBOOK® tailored to the needs of the amateur photographer and attuned to the advanced outdoor photographer. 192 pages. Photos in color and black and white.

## CLIMBER'S GUIDE TO YOSEMITE VALLEY

by Steve Roper. A comprehensive guide to the best rock-climbing routes in Yosemite Valley, with a history of the area, information about campsites, etc. 320 pages. 16 "locator" photos.

## COOKING FOR CAMP AND TRAIL

by Hasse Bunnelle with Shirley Sarvis. A companion to **Food for Knapsackers**, with 200 recipes for campers' meals ranging from the Spartan to the exotic. 144 pages.

## FOOD FOR KNAPSACKERS

by Hasse Bunnelle. Principles of food planning, procedure and equipment, master food list, and recipes for the trail. 144 pages.

## FOOT-LOOSE IN THE SWISS ALPS

### A Hiker's Guide to the Mountain Inns and Trails of Switzerland

by William E. Reifsnnyder. The Swiss Alps for the hiker and backpacker — an information-packed guide to the topography, geology, transportation, trails and huts. 450 pages. Maps and photos.

## HIKER'S GUIDE TO THE SMOKIES

by Dick Murlless and Constance Stallings. Comprehensive guide to the Appalachian Trail and 580 miles of trails in the Great Smoky Mountain National Park. 374 pages. Maps.

## HIKING THE TETON BACKCOUNTRY

by Paul Lawrence. How to hike with confidence in the mountains surrounding Jackson Hole, Wyoming; clothing and equipment, safety, trails, campgrounds, and regulations. Maps.

## HIKING THE YELLOWSTONE BACKCOUNTRY

by Orville Bach, Jr. Natural history of the Yellowstone-Teton region, weather, clothing and equipment, food, fishing and safety information. 228 pages. Maps.

## HUT HOPPING IN THE AUSTRIAN ALPS

by William E. Reifsnnyder. There are more than 500 huts in the spectacular Austrian Alps and this guide shows how to get to them and how to enjoy them. 207 pages. 30 photos and maps.

## HUTS AND HIKES IN THE DOLOMITES

### A Guide to the Trails and Huts of the Italian Alps

by Ruth Rudner. How to get there, huts and trails, tips on money, food and wine; and regulations of Alpine Club Huts. 244 pages. Maps and photos.

## READING THE ROCKS

### A Layman's Guide to the Geologic Secrets of Canyons, Mesas, and Buttes of the American Southwest

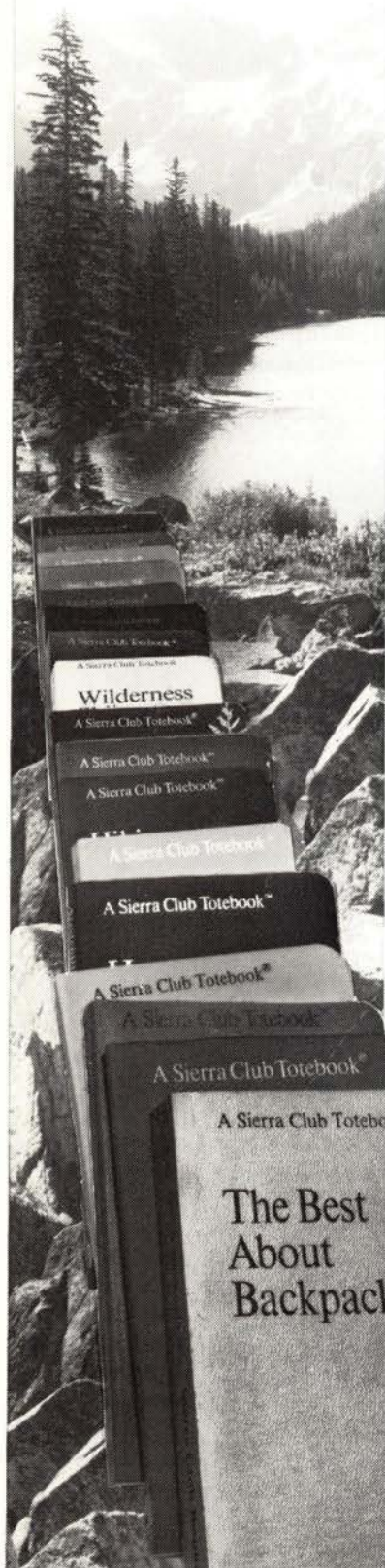
by David A. Rahm. Exploring the geology of the 500 miles of the Colorado Plateau. Color photos and diagrams.

## WILDERNESS SKIING

by Lito Tejada-Flores and Allen Steck. Techniques for wilderness skiing (Nordic and Alpine), equipment, ski tours, environment and hazards, the whole wilderness ski-touring scene in the U.S., Canada, and Alaska. 310 pages. Sketches and photos.

# Sierra Club Books

Use order form on page 28



## Directors

Brant Calkin	<i>President</i>
William Futrell	<i>Vice President</i>
Richard A. Cellarius	<i>Secretary</i>
Lowell Smith	<i>Treasurer</i>
Kent Gill	<i>Fifth Officer</i>
Phillip S. Berry	John H. Ricker
Kathleen Brown	Theodore Snyder
Joseph Fontaine	June Viavant
Mark G. Hickok	Edgar Wayburn
Leslie V. Reid	Ellen Winchester

## Regional Vice Presidents

Earl Bailey	Norman E. Nelson
Marvin Baker	Roger Pryor
Edward Easton III	Robert Rutemoeller
Richard Fiddler	Samuel Sage
Ruth Frear	Thaddeus C. Trzyna

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."

Michael McCloskey *Executive Director*

## Bulletin Staff

Frances Gendlin	<i>Editor</i>
Stephen Whitney	<i>Manuscript Editor</i>
Madeleine Fabris	<i>Production Manager</i>
Carey Charlesworth	<i>Editorial Assistant</i>
Gene Coan	<i>News Editor</i>
Richard Dinihanian	<i>Design</i>

**United States offices:** Alaska: 545 E. 4th Ave., #5, Anchorage, AK 99501 / New York: 50 West 40th St., New York, NY 10018 / International: 777 United Nations Plaza, New York, NY 10017 / **Legal Defense Fund:** 311 California St., San Francisco, CA 94104 / **Midwest:** 444 West Main, Madison, WI 53703 / **Northwest:** 4534 1/2 University Way NE, Seattle, WA 98105 / **Southern California:** 2410 Beverly Blvd., Los Angeles, CA 90057 / **Southwest:** 2014 E. Broadway, Tucson, AZ 85719 / **Washington, D.C.:** 330 Pennsylvania Ave., SE, Washington, DC 20003 / **Wyoming and Northern Great Plains:** P.O. Box 721, Dubois, WY 82513.

**Canadian chapters,** please write: Western Canada Chapter, Box 35520, Station E, Vancouver, B.C., Canada V6M 4G8 or Ontario Chapter, c/o National & Provincial Parks Assn., 47 Colborne St., Toronto, Ontario, Canada M5E 1E3.

The *Sierra Club Bulletin*, published monthly, with combined issues for July-August and November-December, is the official magazine of the Sierra Club, 530 Bush St., San Francisco, California 94108, (415) 981-8634. Annual dues are \$20 of which \$3.00 is for subscription to the *Bulletin*. (Nonmember subscriptions: one year \$8.00; three years \$20; foreign \$10; single copy \$1.00) Second-class postage paid at San Francisco, California, and additional mailing offices. Copyright © 1977 by the Sierra Club. No part of the contents of this magazine may be reproduced by any means without the written consent of the *Sierra Club Bulletin*.

**Editorial correspondence** should be addressed to *Sierra Club Bulletin*, 530 Bush St., San Francisco, CA 94108. Manuscripts must be submitted in duplicate and accompanied by a stamped, self-addressed envelope.

**Changes 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.

**Advertising:** (West) Susan Church, Environmedia, P.O. Box 26442, San Francisco, CA 94126, (415) 566-3512; (Books only) Erwin H. Baker, 20 Evergreen Place, East Orange, NJ 07018, (201) 673-3950; (East and Midwest) William H. Fields III, 22 Montgomery St., Boston, MA 02116, (617) 262-7532.

# Sierra Club Bulletin

APRIL 1977

VOLUME 62/NUMBER 4

- 4 America's Beleaguered Coasts *Ellen Winchester*
- 10 Last Chance for Redwood National Park *Edgar and Peggy Wayburn*
- 12 Wilderness and Life in Cities *John L. Hammond*
- 41 Bad Medicine for the Siskiyou *Francina Welker*
- 45 Alaska's Wild Rivers *Jack Hession*

## Commentary

- 15 Enlightened Management of Renewable Resources: Hope or Reality? *Michael McCloskey*

## Regional Reports

- 19 Tall Grass Prairie: Vanishing Landscape or National Park? *Linda M. Billings*
- 22 Southeast: Controversy on the Savannah *Stuart Johnson*
- 24 Washington, D.C.: The Cocktail Party *Brock Evans*
- 25 From Sierra Club Books: Kid Stuff *Jon Beckmann*

## Departments

- 29 **Books:** Vital Connections *Laughingbird*
- 31 **Brief Reports:** Wildlife
- 32 **News:** OCS leasing slowed; Priority wilderness bill; Energy scenario for Northwest; Arctic Gas Pipeline endorsed; Olympic ski lifts approved; Energy conservation workshop; Class I air designations; Mojave National Park proposed; Action to expand Redwood National Park; Clean-water battle begins; Controversial highways approved
- 34 **Observer** *Robert A. Irwin*



**Cover:** California's Big Sur Coast is perhaps the most rugged in America. The state's new coastal act should save this shore from future development, but what will protect its lonely beaches from the oil seeps of passing tankers? *Photographer, Bill Apton.*

# America's Beleaguered Coasts

ELLEN WINCHESTER



Bill Apron

*The economy of Provincetown, Massachusetts depends on both tourism and fishing. Both may suffer as a result of OCS development contemplated for the nearby Georges Bank, one of the richest fishing grounds in the world.*

**T**he coasts of America are under siege. New job opportunities and the almost mystical attraction of these vulnerable margins of land and sea are swelling population growth in coastal areas three times as fast as elsewhere. Half of all Americans now live within a fifty-mile coastal strip. This pressure is destroying the land they occupy. Where stretches of the coast are not already overcrowded, polluted, bristling with oil rigs or converted to commercial corridors or industrial wastelands, they are almost everywhere candidates for similar destruction. Soon, unless many people quickly organize to influence implementation of new coastal legislation,

the only seascapes left to lift the hearts of poets, lovers, and weary pilgrims seeking spiritual renewal will be limited to national and state parks and wildlife refuges.

The loss is not merely one of aesthetics; it is also one of food in a world hungry for protein. Coastal estuaries are the nurseries of marine life, and coastal waters are the richest fisheries. Already, a quarter of all estuaries in the United States have been destroyed or severely damaged; all the rest have been degraded to some degree. Fish catches are decreasing, and large oil slicks shift with the wind on the waters of our bays and fishing grounds.

Because a few members of Congress, with the aid of thousands of people concerned about the future of the coasts, dared to act in the national

interest even in the absence of a clear-cut national demand, legislation with the potential for protecting the coastal zone already exists. The question remains whether the nation has the will to use these laws to reverse accelerating coastal degradation. The Coastal Zone Management Act of 1972, with its 1976 amendments; the Deepwater Ports Act and the Ports and Waterways Safety Act; the Marine Protection, Research and Sanctuaries Act (often called the "Ocean Dumping Act"); the Fishery Conservation and Management Act; the Clean Air Act; the Water Pollution Control Act; and—of course—the National Environmental Policy Act, are all useful tools. While they do not mandate coastal protection, they do provide the essential ingredients for action.

*Ellen Winchester chairs the Sierra Club's National Energy Committee.*

Florida's 150-mile-long Big Bend, where the peninsula curves northwest and west at the base of the continent, is the strip of coast I know best. Because most of its shore is marshland, and its fishing and forest-products economies have always been depressed, the land is little developed and sparsely populated. Real estate billboards advertise "Selling Florida's Last Frontier." Yet even a thinly settled remnant of coast like the Big Bend suffers from hazards common along the coastline of North America.

**Erosion:** As elsewhere in the Southeast where land is sinking, wave action alone causes beach erosion, without help from man or wind. In late summer, when nature moves our sand beach out to a sand bar, high tides lap the exposed roots of our pines, and the grisly cemetery of stumps and snags at

*The Southern California coast, overwhelmed by refineries, port facilities, power plants, housing developments and freeways, provides an unfortunate model of what the future may hold for other coastal regions.*



Tom Myers

low tide remind us of the destiny of our whole property. When people carve up naturally dynamic oceanfront property into plots, erosion can cause knotty legal problems. For example, should a beach owner be entitled to build a bulkhead and fill behind it to capture new erosion-caused land? When groins and bulkheads are built to protect one person's beach by interrupting natural sand transport to the beach, who has what rights in court? A concept of shifting and rolling easement to permit ownership to follow changing shorelines is gaining favor among environmental lawyers.

With the Army Corps of Engineers' beach-restoration projects costing more than a million dollars a mile, Florida is slowly, county by county, establishing beach set-back lines determined partly by flood tides, partly by vegetative criteria. Their purpose is to allow enough room for natural pro-

cesses to operate. New housing, put on pilings to comply with the National Flood Insurance Act, does less harm to wetlands and primary dunes than filling or bulldozing to build on poured concrete slabs, once the common practice.

**Development:** Directly across St. George Sound from us lie the sloping, sleepy-looking prominences of a twenty-eight-mile-long, dune-covered barrier island of the same name. A

accommodate bigger barges. The deeper the barge channel, the greater the threat that toxic sediments from up-river industrial development, induced by the cheap transportation, will pollute the estuarine system. As things stand, the forested floodplain both absorbs pollutants before they reach the bay and produces organic detritus upon which marine life depends.

Another barge channel, the Intra-coastal Waterway, threads behind barrier islands from the Mississippi River

*Oregon is rightly famed for the beauty of its coast, yet wild promontories such as the Otters Crest Cape are but a short distance from sprawling resort towns, where motels and trailer parks compete for available space along the shore.*



Byron Dudley

combination of a state park at one end, land speculators and the Franklin County commissioners have together saved it from high-density vacation homes following the construction of a bridge. The bay produces eighty-seven percent of Florida's oysters. The sewage, sediment runoff, and pleasure-boat traffic that would result from 20,000 to 50,000 new residents on the island would ruin the world of the oyster. So far, fortunately, the county commissioners have not been persuaded they could do better fleecing summer residents than maintaining a fishing economy.

**Dredging:** Other threats bear down on the bay shellfish. The wooded, 107-mile-long Apalachicola River already serves as a shallow barge canal for industry in Alabama and Georgia. It is annually threatened with dredging and damming by the Corps of Engineers to

to Carrabelle, a Big Bend port for shrimpers. There, shipping moves into the Gulf around Alligator Point and St. Marks Wildlife Refuge, site of the waterway's so-called missing link. St. Marks contains a 17,500-acre wilderness area, is wintering ground for birds of the North, and year-round home for egrets, gallinules, limpkins, white pelicans, ibis, bald eagles, osprey, turkey, alligator, deer and mosquitoes. Perhaps wilderness designation can save the refuge from the waterway, but the Army Corps' canal projects have more lives than a cat.

**Oil Pollution:** From St. Marks, the marshes of the Big Bend, formed by the deltas of a thousand little streams, extend a hundred miles to Cedar Key. In coastal marshes and estuaries nature is at her most productive, often exceeding on a per-acre basis agricultural yields by a factor of two or more.

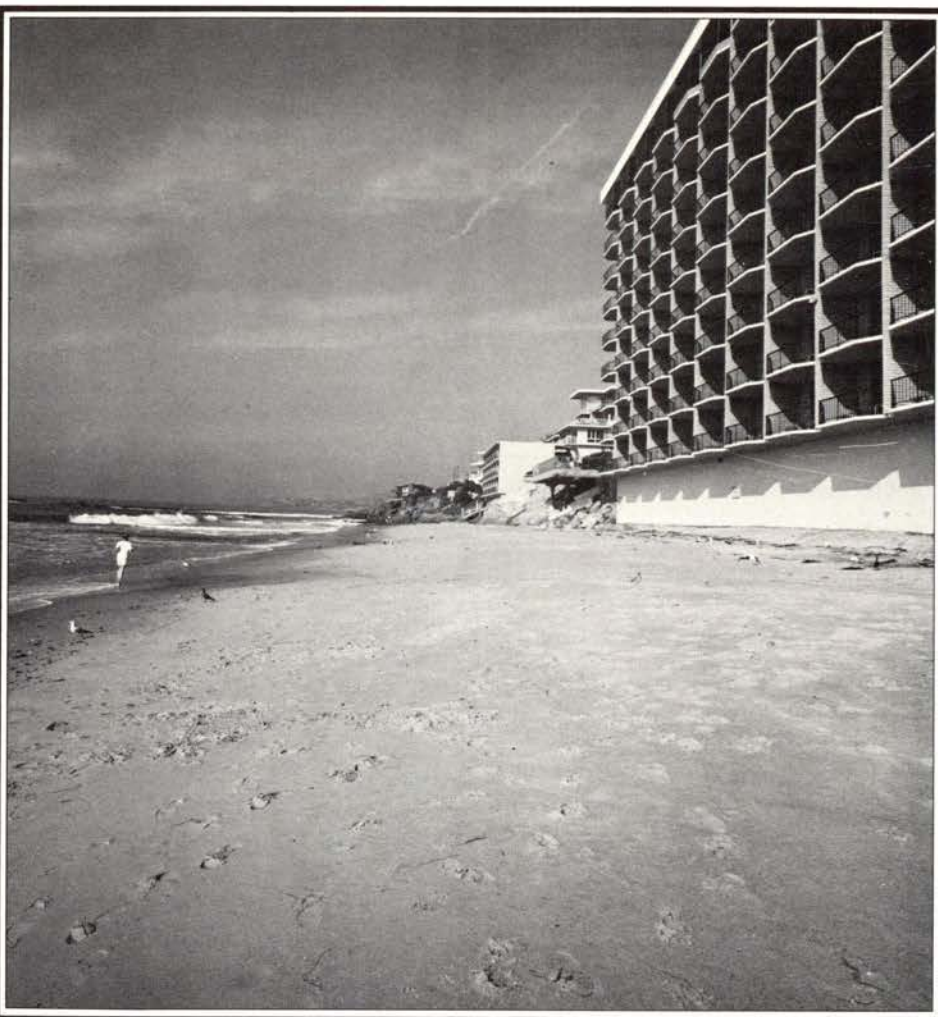
Here, decomposing grasses provide a rich broth to nourish phytoplankton, food for tiny crustaceans and zooplankton. These in turn are the nursery diet of shellfish and fishes consumed by larger aquatic creatures, some of which, particularly red snapper, grouper, mullet and flounder, are the basis of the sport and commercial fishing in the northeastern Gulf of Mexico. In 1973, part of the outer continental shelf (OCS) due west of these marshes was leased, along with other tracts, for oil and gas drilling at a cost of \$1.5 billion to the oil companies. As yet no oil has been found.

Unfortunately, another source of oil trouble looms ahead: supertankers. Two deepwater ports, LOOP off Louisiana and SEADOCK off Freeport, Texas, have permits for construction. One supertanker catastrophe could irreversibly destroy the marshlands of the Big Bend, where no barrier islands like those to the west stand offshore to stem the tide of oil. Fifty-one thousand tons of crude spilled by the tanker *Metula* two years ago coated seventy-five miles in the Straits of Magellan with an oil emulsion fifty to 200 feet wide and one to four inches deep. Since the recent epidemic of Liberian tanker spills, even the Coast Guard has admitted that no adequate means exist of containing or cleaning up spills at sea.

Even without a catastrophic spill, the chronic small ones associated with tanker traffic—Exxon has already chartered ships to bring Alaskan oil to Gulf and East Coast ports—are a threat to Gulf sea grasses, another marine food source, and other life forms inhabiting the marsh. Hydrocarbons stored in the fatty tissue of fish and shellfish adversely affect their life cycles and productivity in ways not yet fully understood.

The threats to Florida's Big Bend from various human enterprises, in both their variety and the complacency with which they are pursued, typify the situation along all our coasts. Far to the north, a real coastal frontier 6,640 miles long awaits swift, irreversible change from oil and gas development. In addition to the North Slope fields, eight areas around Alaska's continental shelf are tentatively scheduled for leasing before 1980.

Oil and gas development anywhere on the Alaskan OCS, from the Beaufort Sea—summer home of myriad birds; refuge of beluga whales, polar



Brian Black

bears, seals and sea lions—all around the peninsula, will be done under the most adverse conditions the industry has ever encountered, including earthquakes, undersea landslides, tidal waves, pack ice and high seas and winds.

As an example of risk, spills on tracts near Kodiak Island in the Gulf of Alaska, to be leased in November unless delayed by Secretary Andrus' review of leasing schedules, will endanger the breeding grounds for scallops, salmon, crab and shrimp that have made Kodiak home of the second largest fishing port in the nation. On tidal flats in this gulf, densities of more than 250,000 shorebirds per square mile have been observed.

Once OCS or Prudhoe Bay oil safely leaves Alaskan waters, its potential for coastal damage continues—all the way around the continent. In the Atlantic, oil spills large and small, endanger one of the world's most important fisheries, the Georges Bank, scheduled for OCS leasing in June, as

well as prolific fisheries in the Mid- and South Atlantic. Marine biologists believe Atlantic fisheries have nearly reached the limit of their ability to withstand pollution.

Since the Santa Barbara disaster of 1969, a picture of a dying, oil-soaked seabird has become the symbol of oil's threat to wildlife. According to an official of the U.S. Fish and Wildlife Service, tens of thousands—perhaps millions—of seabirds may be adversely affected by further oil and gas development off Southern California, where five million more acres in the Santa Barbara Channel have been nominated for oil and gas leasing in 1978. Seals, too, are vulnerable to oil spills, particularly during breeding season, when feeding young means frequently entering the water. One of the Channel Islands, San Miguel, supports the largest rookery in the United States. Kelp beds, an important source of food and habitat for marine life all along the West Coast, and corals are sensitive to contamination of any kind.

*Other Pollutants:* Oil from marine sources has taken the headlines this year, yet it is a relatively new stress on coastal habitats. More familiar and still dangerous are the effluents from chemical industries; sulfite from pulp mills; fertilizer, pesticide and sediment run-off from agriculture and lumbering; and used lubricating oil dumped in sewers, which is perhaps greater in volume even now than oil from tankers. Whether the ocean can safely serve as a dump for the sewage of the continent's coastal cities is another question raised with growing concern by marine biologists. Red tides of mysterious origin seem to be increasing. The closing of shellfish beds and bathing beaches because of high coliform-bacteria counts is common. Sewage-caused disease among fish has been documented, but the extent and gravity of the problem has not been studied sufficiently.

The rapid proliferation of coastal electric-power plants has created a new stress on water quality. Cooling towers recirculate water and build up mineral concentrations that periodically must be flushed. Thermal discharge has been known to disrupt an ecosystem for a distance of thirty-five miles, kill corals and harm marine grasses. With an open cooling system, thirty percent or more of the annual brood of estuarine spawning fish can be killed by the operation of a single 1,000-megawatt plant located in a semi-enclosed system, such as the Indian Point nuclear-power plant on the Hudson River. Fossil-fuel plants must discharge inorganic waste water polluted by stack-gas scrubbers. Floating nuclear-power plants, like those planned for sites twelve miles from Atlantic City, may drop their reactor cores in the sea should they suffer coolant failures, with consequences to marine life as yet unassessed.

*Dredge and fill:* But damaging as pollutants are now, and promise to become, the worst harm to the coastal zone historically has been its steady obliteration by earth-moving machinery, the harbor dredging and wetlands-fill construction that has built much of present-day Seattle, Boston, New York, and other major and minor coastal cities. California's prime example of estuarine destruction is San Francisco Bay, deprived of one third of its original area and three fourths of its marshland by cities hemmed in



Ansel Adams

by hills. New York's proposed Westway Highway is a portent of future ambitious developments.

The great estuaries of the Atlantic—Chesapeake Bay, Delaware Bay, Long Island Sound, Narragansett Bay, Buzzard's Bay, Cape Cod and Massachusetts Bay—are facing unprecedented hazards. Plans are under way to mine forty-two billion tons of sand and gravel from estuaries near metropolitan centers. In Salem, New Jersey, on Delaware Bay, the first of four units of what may become the world's largest nuclear installation has received a license to operate. Secretary Andrus has announced he will appeal a lower court's cancellation of an OCS lease sale off New Jersey and Delaware. Meanwhile, sludge from sewage and dredging spoils has created a dead sea from Sandy Hook to Atlantic City, menacing Long Island and New Jersey beaches.

*Port Development:* The development of supertankers too large for existing ports, and the nation's escalating energy appetite have increased demands for new oil and coal ports. As of this writing, site selection for West Coast ports to receive Alaskan oil and gas is the focus of much controversy from Long Beach to Puget Sound. By contrast,

with oil production in the Gulf of Mexico decreasing, the petrochemical industry in Texas and Louisiana is counting on the deep water ports SEADOCK and LOOP to bring in the hydrocarbons to keep them in business. Deepwater ports are being studied for Maine, North Carolina, and New Jersey. A coal port on Lake Superior to supply power plants in Chicago, Detroit, Cleveland and Buffalo is predicted to double lake shipping, with attendant dock-side dredging and chronic oil spillage.

Behind the barrier islands of South Carolina and Georgia is one of the least industrialized coastlines in the continental United States. It consists almost entirely of wetlands—easy picking for ports, submarine bases, oil refineries, power plants and paper mills. If OCS oil is found, following a lease sale scheduled for September, related industry can be expected to pour into this coast, as it has into Louisiana's where between 1936 and 1971, eighty percent of all new manufacturing investment was in coastal parishes. An unanswered question of particular concern to the southeastern states is the effect that the Gulf Stream, with its unchartable swirls and eddies, would have on the transport of pollutants.

*Unrelenting Nature:* All of this human misuse and overuse of the coastal zone would be less costly if the forces of nature were more kind. Seismic catastrophes make headlines, but the steady loss of cliff shorelines on the West Coast, under the attack of Pacific storms or the pace of erosion on low-lying Gulf Coast deltas, is less publicized. Between the Brazos and Colorado rivers in Texas, erosion has pushed back the shoreline 300 feet in sixteen years. Louisiana lost—while almost nobody was looking—an estimated 500 square miles of marshland in thirty years in a delta that should have been growing. Once cut by oil-company dredging, it almost melted away under the stress of tides and hurricanes. The fact that people have, by dams and divisions, steadily reduced the supply of river sediments to the ocean may well have contributed to these problems.

On the Gulf and South Atlantic coasts, a region of frequent hurricanes, the high-rise, classic kind of beach construction associated with Miami Beach and retirement or vacation-home development is spreading rapidly.

Where beaches are lacking, mangrove swamps, both a fertile fish and shellfish nursery and a hurricane buffer, have been the target of dredge-and-fill efforts to increase real-estate values. Russell Train reports that around 200,000 acres of shallow coastal bays have been destroyed in the Gulf and South Atlantic over the past two decades. The

for coastal management to be submitted to the Secretary of Commerce for approval. Merely to comply with this first step required that each governor designate a state agency to inventory the state's coastal resources, pinpoint areas of special concern and see that a plan to protect them gets down on paper.

more emphasis on this aspect of the planning process so far than on any other. More than half the coastal states have set up citizens advisory groups; all must hold enough public hearings to assure the Secretary of Commerce that "there has been a full and effective opportunity for public involvement in every portion of the plan."

In theory all of these involved people should compromise their differences and form an irresistible wave of enthusiasm for the state's CZM plan, sweeping through the legislature any special land-use regulation required. Land developers, however, usually have more influence over state legislators than coastal citizens, no matter how many hearings and committee meetings they attend. In fact, it is a safe bet that land developers can be found liberally sprinkled through most of the citizens advisory committees, not to mention the legislatures themselves. The only way to win maximum coastal benefit out of the opportunity presented by the CZM Act, or perhaps to win *any* benefit, is for great numbers of informed, environmentally oriented citizens to take an interest, on or off advisory committees, in monitoring the development of the plan, criticizing it at every possible opportunity and lobbying needed legislation through the state legislatures.

Passage of Section 308 of the CZM Act amendments, the Coastal Energy Impact Program, has at once complicated and eased the challenge to "coastal people." The amendments make available \$800 million over the next ten years for building the roads, schools, sewage systems and similar facilities needed by the increased population brought in by energy developments. This will make it easier for impacted communities to meet their responsibilities without impoverishing the taxpayers. The money will compensate communities for costs incurred by offshore OCS development that would otherwise bring in no money to the state. Facilities to store any fuel, including coal and liquefied natural gas (LNG), that require siting on the coast can also qualify a community for loans, loan guarantees and grants. No great leap of the imagination is required to visualize a city council buffered by these circumstances, deciding that an OCS support facility



Robert Pollock

*The dunes, wetlands, beaches and barrier islands of the Gulf and South Atlantic coasts together constitute one of the most congenial environments for people and wildlife alike. But the charm of these coasts, as well as the wildlife, is steadily retreating before advancing real estate and industrial developments.*

Open Space Institute and the National Resources Defense Council have found that forty-three of eighty-one barrier islands from Georgia to Virginia are in danger of destruction through real estate development that eliminates the natural defense of dunes and vegetation to the violence of wind-driven water. All of the Maryland and Delaware ocean shorelines and all but seventeen miles of the New Jersey shore are considered critical erosion areas.

So it goes.

Our grandchildren will not let us off with a Vonnegut shrug, however, especially since we have the legislation to protect their heritage. Our major tool, the Coastal Zone Management (CZM) Act of 1972, as amended in 1976, is designed to strengthen state control of coastal land and water. With the exception of Washington, already implementing an approved plan, all thirty states and four territories to which the act applies are working on state plans

In many states this was the first effort ever made to focus state attention on coastal problems. The next step is the establishment of a state authority to receive and use federal funds to implement the approved plan. Therein lies one of major problems that many states are now hung up on. Another is passing legislation to provide regulatory powers for the state. The state authority problem provides an irresistible opportunity for state agency rivalry; the requirement for regulation inevitably impels argument over the difference between regulation and confiscation, the "taking issue."

The writers of the CZM Act obviously hoped to avoid legislative roadblocks by providing for the maximum amount of citizen participation at the local level, with every relevant state, federal, local and regional governmental entity involved in a communications network. In fact, the Office of Coastal Zone Management (OCZM) has put

*Continued on page 26*



# FREE TREE

Send us a new member during Membership Week, and we'll give you your choice of a STARK BROTHERS apple, pear or peach tree absolutely FREE. For details of this special offer, see the Membership Week Ad in this issue of the Bulletin.

**Sierra Club  
Membership Week  
May 15-22**

## MEMBERSHIP CATEGORIES

- |                          |                       |         |
|--------------------------|-----------------------|---------|
| <input type="checkbox"/> | Regular               | \$20.00 |
| <input type="checkbox"/> | with spouse           | 30.00   |
| <input type="checkbox"/> | Supporting            | 40.00   |
| <input type="checkbox"/> | with spouse           | 50.00   |
| <input type="checkbox"/> | Contributing          | 100.00  |
| <input type="checkbox"/> | with spouse           | 110.00  |
| <input type="checkbox"/> | Life (per person)     | 750.00  |
| <input type="checkbox"/> | Student               | 10.00   |
| <input type="checkbox"/> | with spouse           | 15.00   |
| <input type="checkbox"/> | Senior (60 or over)   | 10.00   |
| <input type="checkbox"/> | with spouse           | 15.00   |
| <input type="checkbox"/> | Junior (through 14)   | 10.00   |
| <input type="checkbox"/> | Spouse of Life Member | 10.00   |

(Dues include Sierra Club BULLETIN (\$3.00) and chapter publications (\$1.00).)

Enclosed is \$ \_\_\_\_\_. Please enter a membership at the rate checked for:

New Member's Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Zip \_\_\_\_\_

Your Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Zip \_\_\_\_\_

## MAIL TO:

Sierra Club, Dept. MS, P. O. Box 7959  
Ricon Annex, San Francisco, CA 94120

Please send me a:

(Indicate first and second choice)

- Stark Brothers semi-dwarf red delicious type apple tree.
- Stark Brothers dwarf peach tree.
- Stark Brothers dwarf pear tree.
- Thanks, but I have no place for my tree. Just keep it and send \$4.00 per new member to the \_\_\_\_\_ Chapter.

**Sierra Club  
Membership  
Week  
May 15-22**

Trees will be given for "Regular" memberships only.  
Offer ends June 10, 1977.

## MEMBERSHIP CATEGORIES

- |                          |                       |         |
|--------------------------|-----------------------|---------|
| <input type="checkbox"/> | Regular               | \$20.00 |
| <input type="checkbox"/> | with spouse           | 30.00   |
| <input type="checkbox"/> | Supporting            | 40.00   |
| <input type="checkbox"/> | with spouse           | 50.00   |
| <input type="checkbox"/> | Contributing          | 100.00  |
| <input type="checkbox"/> | with spouse           | 110.00  |
| <input type="checkbox"/> | Life (per person)     | 750.00  |
| <input type="checkbox"/> | Student               | 10.00   |
| <input type="checkbox"/> | with spouse           | 15.00   |
| <input type="checkbox"/> | Senior (60 or over)   | 10.00   |
| <input type="checkbox"/> | with spouse           | 15.00   |
| <input type="checkbox"/> | Junior (through 14)   | 10.00   |
| <input type="checkbox"/> | Spouse of Life Member | 10.00   |

(Dues include Sierra Club BULLETIN (\$3.00) and chapter publications (\$1.00).)

Enclosed is \$ \_\_\_\_\_. Please enter a membership at the rate checked for:

New Member's Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Zip \_\_\_\_\_

Your Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Zip \_\_\_\_\_

## MAIL TO:

Sierra Club, Dept. MS, P. O. Box 7959  
Ricon Annex, San Francisco, CA 94120

Please send me a:

(Indicate first and second choice)

- Stark Brothers semi-dwarf red delicious type apple tree.
- Stark Brothers dwarf peach tree.
- Stark Brothers dwarf pear tree.
- Thanks, but I have no place for my tree. Just keep it and send \$4.00 per new member to the \_\_\_\_\_ Chapter.

**Sierra Club  
Membership  
Week  
May 15-22**

Trees will be given for "Regular" memberships only.  
Offer ends June 10, 1977.

# Let's Get Growing

## Because the battles we fight are too important to lose.

For 81 years, we Sierra Club members have been fighting to save the special wild places we love. And we've never been willing to lose even one of them, for once lost, they are gone forever.

We still fight for wilderness, but our concern now is for the total environment. Clean air and water, sound energy policies, conservation of all our natural resources...the list goes on and on. And frankly, it's an overwhelming task. So we need help.

More members (and more money) to fight the ever growing number of battles. For they are also too important to lose.

## Get a new member and we'll send you a tree.

As an incentive to get each Sierra Club member to sign up at least one new member during Membership Week, we'll send you a special gift. Not a book or poster, but a live and green and growing tree.

Here's how it works.

Use the special application forms and mailing address bound in this copy of the Bulletin. Send us the completed forms, along with the new member's name, address and check.

For each application you mail during Membership Week, we'll send you a tree. One new member, one tree. Ten new members, ten trees. Just a little effort and you'll have your own orchard. Trees will be given for "Regular" memberships only.

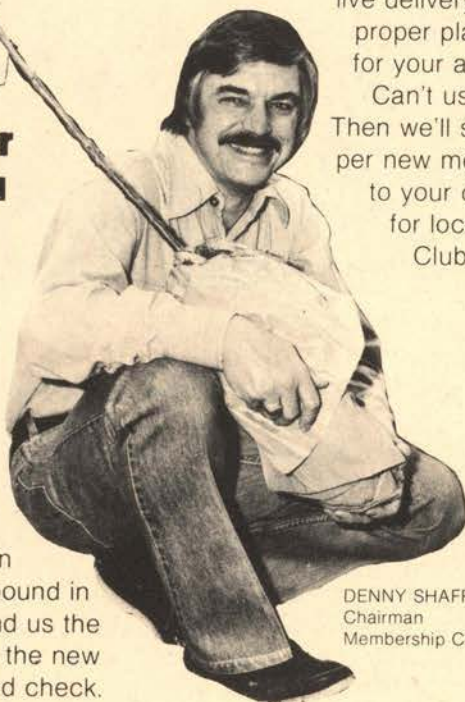
## They're very special trees.

The tree we'll send you is from Stark Brothers Nursery, a family business growing outstanding trees since 1816 (Luther Burbank worked with Stark Brothers).

You have your choice of trees... a semi-dwarf red delicious type apple, or dwarf peach or pear tree. Though growing to only 8 to 15 feet they will produce large fruit in 18 to 24 months. These trees, which regularly sell for \$8.95 to \$10.95 will be shipped directly to you from the nursery to guarantee

live delivery at the proper planting time for your area.

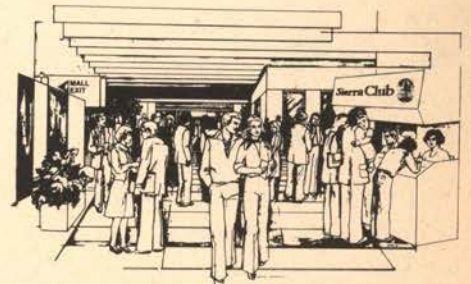
Can't use a tree? Then we'll send \$4.00 per new member to your chapter for local Sierra Club projects.



DENNY SHAFFER  
Chairman  
Membership Committee

## Ask a friend to join the Sierra Club.

Put the special Membership Week applications in your pocket now. Invite someone to join the Sierra Club today. Tell them of our concerns, the battles we are fighting. And tell them too of the joy of winning, and the fun and friendship of Sierra Club outings and meetings.



## Gift memberships too.

There is no better gift to give than a Sierra Club membership. In a world of wasteful, nonsense gifts, a Sierra Club membership is truly beautiful.

So at any giving time, think of "giving the Sierra Club." But give a Sierra Club gift membership during Membership Week, and we'll send you a gift...one of these very special trees.

During May, each regional group and chapter will have programs and activities to emphasize the Sierra Club's desire to "Get Growing." The success of this Membership Week, however, depends on you.

# Sierra Club Membership Week May 15-22

# Last Chance for Red



Ansel Adams

*The following appeared in part in an article published in the Sierra Club Bulletin ten years ago.*

## EDGAR & PEGGY WAYBURN

Think, if you can, of the time encompassed in a million years, of the days and nights in ten thousand centuries, of the mighty forces of the earth working throughout that length of time on the land where the redwoods grow. How many storms swept in from the sea to beat against those shores, how many savage winds and tides and floods? How many wildfires raced unchecked? How many earthquakes shook and shaped that land?

Douglas Shirachi

Think of a forest living on through all those adversities as the redwoods did along the foggy rim of the Pacific. Some trees stood for more than 2,000 years, and when they fell, there were others left to go on living. The continuity of that great forest was not really challenged until people, with their ability to change and destroy, found it. Now, in a little over a century, most of the primeval forest has fallen, and it is still falling.

If there had been no redwoods, peo-

*Edgar Wayburn is a Sierra Club director. Peggy Wayburn is a freelance writer.*

ple would have managed. But there were redwoods, and there seemed to be so many reasons to cut them. There were cities to be built and rebuilt, there was the market for shingles and shakes and sidings, for grape stakes and railroad ties, for fence posts, cigar boxes, coffins, panels and patio furniture.

And so, for every 100 acres of redwoods we found, we cut about 95. Because some people cared, we have dedicated about 3 acres out of each 100 for the Redwood National Park and California redwood state parks.

Some of these fragments of the primeval forest are small, almost as tall as they are wide. But you can walk among their trees and consider the long, dim corridors of time and sense how the world was a million years ago.

How "saved" these redwoods are we do not know. Hundreds of the greatest park trees have been toppled by floods made lethal with run-off from stripped watersheds. Some of the best park groves have been severed by freeways, their dignity and quietness lost in the roar and smell of trucks and cars.

# wood National Park



Other fine parks are threatened with the same fate. Logging defines the boundary of almost every park, leaving trees exposed to wind and storm.

The men who are cutting the last primeval redwoods today—and who want to cut on to the end—are very reassuring. Many level the forest and scrape bare the forest floor with bulldozers, and re-seed with fir and pine and spruce where the redwoods grew. They speak of harvesting overmature trees, of tree-farming and sustained yield. Sometimes they talk of growing

redwoods like a crop of corn. But the economic crop, and the crop they plan to grow, will be for pulp, and this they say “honestly.”

What this honestly means, of course, is that where the great trees once grew for centuries, small trees will stand for 40 years or so. The land that bore the giants will bear striplings. There is serious question as to whether the steep, fragile slopes of the redwood region can survive “sustained yield” as it is practiced. In too many places, bed-rock has already emerged, the rivers

are thick with silt, the streams are ugly gullies.

Yet, while we argue, the chain saws are not idle. Dozens of trees can fall in a day. A bulldozer can tear apart in a morning the soil laid down for a hundred centuries. And men who do not care about this last-chance park have the power to destroy it.

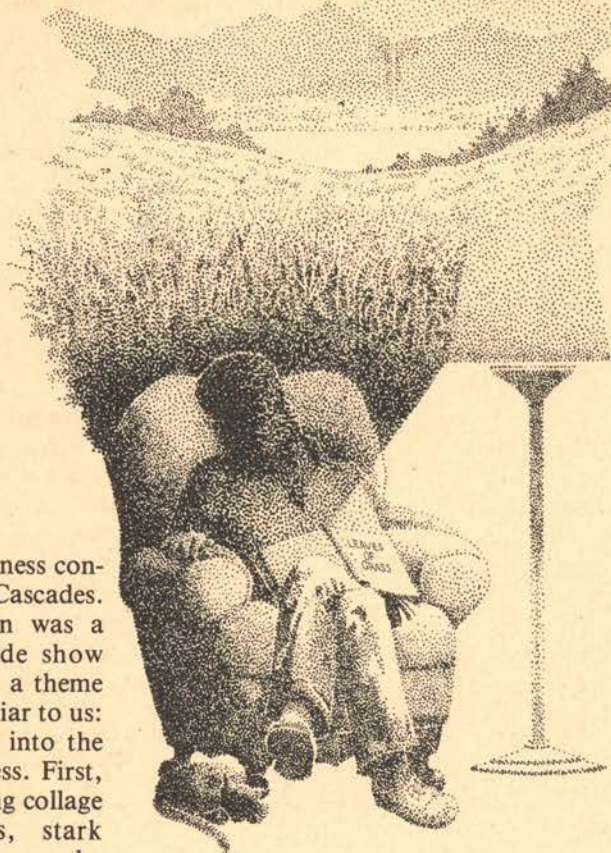
If they do destroy it, if we let them, if we find it too costly to stop them, how will we explain to those who come after us? All people should have a chance to stand among the ancient forests, to touch the trees and reflect on how life has endured and can continue on this planet. Timeless until we came, these forests are entitled to survive, let us say, even if there were no people at all.

\* \* \*

In the eight and a half years since the Redwood National Park was established, logging upslope and upstream from its boundaries has amounted to a crime against nature. If such logging continues, expert scientific opinion tells us that much of the best of the park will be destroyed. The country should be grateful to Congressman Phillip Burton for introducing HR 3813, which gives us a chance to stop the destruction. It offers the last best hope for the redwoods up Redwood Creek, and the last and only chance for a Redwood National Park that will have meaning for the generations to come.

SCB

# Wilderness and Life in Cities



I recently attended a wilderness conference in the Oregon Cascades.

The keynote presentation was a multi-media program, a slide show with live music. It developed a theme that has by now become familiar to us: escape from the tawdry city into the serene beauty of the wilderness. First, we were treated to a depressing collage of traffic-choked freeways, stark buildings, impersonal sidewalk crowds, polluted waters, and vistas of distant mountains swimming in the haze of city smog. Suddenly, the screen was filled with pristine mountain scenery: young hikers moving along the trail in early morning sunlight; clear water gurgling among polished stones; all ushered in by the opening notes of the small bluegrass band whose melody expanded deliciously and irrepressibly. The audience visibly relaxed, gave a sigh of relief, and luxuriated as the splendid panoramas of nature in the large and the small continued. We had arrived at last!

But even then I felt a nagging unrest that spoiled my satisfaction in this simple, familiar story. There is truth in the story of "escape" from the city into wild nature. But the way the story is usually told does the cause of wilderness a disservice. Furthermore, it encourages perception of things as black or white and satisfies our wistful longing for simple solutions, which is a plague to be resisted.

*John L. Hammond teaches philosophy at Portland State University in Oregon.*

---

## JOHN L. HAMMOND

---

We must have done with this idea of the city as a place to escape *from*, the wilderness as a place to escape *to*. It only strengthens the misleading stereotype of the wilderness person as antisocial, undemocratic, irresponsible. Those who fight against the wilderness cause are only too glad to promote this public image of the wilderness lover.

But it is not just concern about public image and political effectiveness that lies behind my misgivings. This emphasis on the contrasts, the bad city and the beautiful wilderness, works against the achievement of a wholeness of life we desperately need. The vast majority of us now live in cities. A whole life requires that we heartily affirm our identity as both urban creatures and friends of wilderness, that we strive for a view of both the city and the wild experience that appreciates their mutual, supportive interactions,

that sees these as ingredients in the fullest life a person can lead.

Still, there was a grain of truth in that music and slides program, in the pleasure we felt as it moved us from the ugly city to the beauties of nature. We go to the wilderness, in part, to find things we do not have in city life: obvious things like quiet, natural darkness, the charm of natural settings, absence of human artifacts. Likewise, we are drawn back to the city because it offers what wilderness cannot: the range of activities and institutions that nourish the life of civilized human beings—music, art, science, politics and society. Life spent solely in wilderness without civilized amenities would be, or become, a kind of savagery. Thoreau, at Walden, occasionally felt the impulse to become a wild man, to catch the woodchuck with his bare hands and devour it raw, but he remained a highly civilized person in the wilderness because of the urbane influences, the depositions of cultured life that he brought to his Walden experience—science, literature, philosophy. He maintained and renewed his participation in these cultural resources through continued reading, reflection, correspondence, and conversation with his friends in Concord.

If we stopped at this point, an important part of the story would remain untold. Wilderness and urban life not only can complement each other, they can work together to enhance and support a richer experience of both.

At the conference mentioned above,

Willi Unsoeld, philosopher-professor at Evergreen State College in Portland, spoke of the need to "wildernessify the city." His point was this: though urban life can never be like life in the wilderness, we can have *more* in the city that we value in wilderness—obvious things like cleaner air, less noise, curtailment of the mania to light everything up all night long. We can have more of nature in parks and malls, albeit a cultivated nature. But beyond these there are more subtle influences that wilderness could have on city life, in the area of improved human relations, for example. Sociological studies of wilderness users (such as those by John Hendee, a researcher for the U.S. Forest Service) have shown that most wilderness visitors prefer to be in the wilderness with other people, usually intimates such as friends or family members. They value their wilderness sojourn in part as an opportunity to enrich and deepen relations with intimates. How does wilderness provide this opportunity? An interesting answer is suggested by Don McKinley, a psychiatrist in Portland, Oregon. McKinley, himself a person with much wilderness experience, sought answers in the reports of his clients who went to the wilderness with others. He concluded that human relations in the wilderness are more satisfying because people tend to drop the sense of status they otherwise project and react to in others. They are able to relate as equals in spite of differences in age or position in society. This makes for greater cooperativeness, openness, intimacy. In other words, a successful social experience in the wilderness partakes of just those characteristics we envision when we dream of a better life in human society. We want to reduce the separations, the tensions, created by a sense of social role, of ranking and rivalry. We want a more true egalitarianism of the kind, for example, that seems to be developing between students and faculty in the universities. So the wilderness experience can be a wholesome leaven for our urban existence, inspiring us to move toward more satisfying human relationships.

So far, most of my wilderness friends, good urban folk, would go along with me. The good life is life in the city with opportunity to enjoy the wilderness. Furthermore, our experience of wild nature can open our eyes to possibilities of a richer life in the

city. But there is a further point to make that to me underscores the interconnection of urban scene and wilderness. What we so easily call the "wilderness experience," this capacity for a many-faceted appreciation of the wild, is not a genetic endowment like, say, color perception, but is itself one of the fruits of higher civilization—a product, essentially, of life in cities.

The few times I have proposed this concept to friends—quite tentatively, since it is an idea of which I am still trying to take the measure—the response has been rejection, or at least considerable scepticism. I present the idea here in the spirit of an hypothesis that deserves attention if we want to achieve a more holistic view of human life in civilization and in nature. The "wilderness experience" has many elements, and at least two are relevant to my point: those areas of appreciation we can plausibly suppose to re-

quire a familiarity with the arts and with the natural sciences. The special kind of appreciation or enjoyment of nature that, perhaps for lack of a better term we call "aesthetic," may very well depend upon familiarity with the arts. Perhaps the most likely evidence for this claim is the case of poetry. I invite you to ponder the extent to which your perception

of beauty in nature has been opened, schooled, refined by long acquaintance with favorite poems. High on my own list would be the poetry of English Romantics such as Keats and Wordsworth. If you are drawn to more contemporary expressions, it might be the work of Gary Snyder or Theodore Roethke. The general point might well be extended to include the influence of other arts, such as painting, music, sculpture. Does not our acquaintance with these open up dimensions of the perception of nature that might otherwise be foreclosed? I admit that this is a large and speculative theme, and I pretend to do no more here than open it up and invite critical reflection.

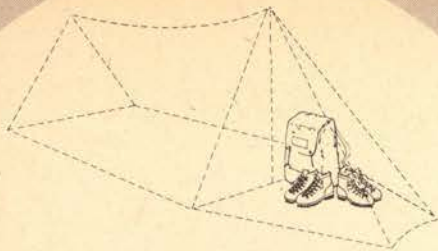
Another "urban product" on which a whole range of wilderness appreciation is dependent is what we collectively call *science*. Aldo Leopold wrote that we value wilderness in part because being there can evoke a sense of



quire a familiarity with the arts and with the natural sciences.

The special kind of appreciation or enjoyment of nature that, perhaps for lack of a better term we call "aesthetic," may very well depend upon familiarity with the arts. Perhaps the most likely evidence for this claim is the case of poetry. I invite you to ponder the extent to which your perception

our organic dependence on the land, what he called perception of the "man-land relation." A related perception is that of the complexity of natural systems. Certainly, neither of these values would be available to us, or as available, without the aid of scientific understanding, some familiarity with that organized mass of information brought systematically under



Lightweight backpacking tent  
with a mud room?

# Eureka!

Highlite is that tent.

The Highlite gives your packs and muddy boots a room of their own—outside of your comfortable 5 x 7-foot sleeping room, but in out of the weather. Yet total weight of tent, fly, frame and stakes is just 6 pounds, 3 ounces.

Look closely and you'll discover an abundance of thoughtful ideas . . . breathable sidewalls with a rain-shedding hooded fly . . . a rear window and front vestibule vent for good ventilation in bad weather . . . a pocket that prevents losses and protects breakables . . . screening so fine it excludes the tiniest pests . . . and self-healing, freeze-resistant nylon zippers. And more.

See the Highlite with room for two people and their gear where you shop for quality camping equipment.

## Eureka! Tent, Inc.

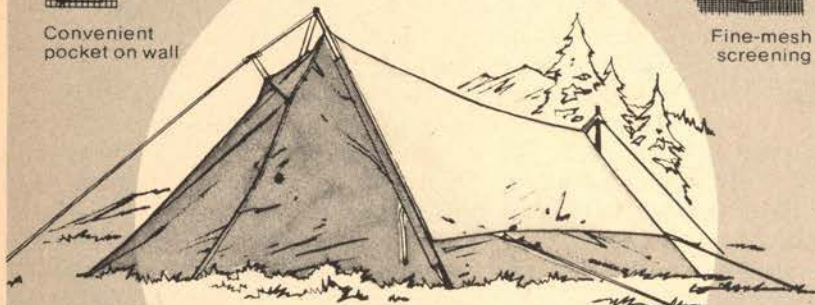
A Subsidiary of Johnson Diversified, Inc.  
Box 966, Binghamton, New York 13902  
Please send 50¢ if you request a catalog.



Convenient pocket on wall



Fine-mesh screening



EUREKA! HIGHLITE

Since 1895 . . . thoughtful ideas by the tentful.



Shock-cord-connected poles



Self-healing zippers

labels such as zoology, botany, geology, astronomy and the like. But science, as a continuing institution, patiently nurtured over centuries, is inevitably an urban phenomenon. (Consider the location, the nourishing matrix, of the great university and research foundations.) Here again, as in the case of the arts, we see that the enjoyment of wilderness is possible in large part because of those "mind sets" we bring to wild nature whose development would be inconceivable outside an urban context.

The point I am trying to make might be put more forcefully to the reader in negative terms. Try to imagine the effect on your enjoyment of wilderness if all the subtle influence engendered by your encounter with the arts and sciences were somehow wiped from consciousness. Try to imagine the impoverishments, the diminutions, that are likely. I submit that if you could subtract from consciousness the modes of sensitivity or awareness that derive from familiarity with these civilized disciplines and products, you would simply eliminate most of what is recognizable in the enjoyment of wilderness.

In his remarkable book, *Wilderness and the American Mind*, Roderick Nash chronicles the gradual emergence in America of the idea of wilderness as a good thing. From the beginning, those who perceived wilderness this way were a small, randomly occurring group of individuals; but their perceptions had been schooled by some one or other of the sophisticated institutions of urban life. Thus Thoreau and Muir were university graduates, Catlin and Audubon were artists. The "rude pioneer," as Nash points out, viewed wilderness as a formidable opponent to be conquered and domesticated. No doubt much of this negative attitude was due to the harsh exigencies of life on the frontier. But it is significant to reflect that the "rude pioneer" lacked for the most part those civilizing influences that helped others take a different and more positive view of wild America.

Thanks to the eloquence and insight of such people as Rachel Carson, Aldo Leopold and Garrett Hardin, we are well on our way to grasping that "seamless unity" in the world of nature that we must learn to respect. We now need to apply this mode of integrative awareness to the bond between our experience in nature and our life in the social community. SCB



# Enlightened Management of Renewable Resources:

## Hope or Reality?

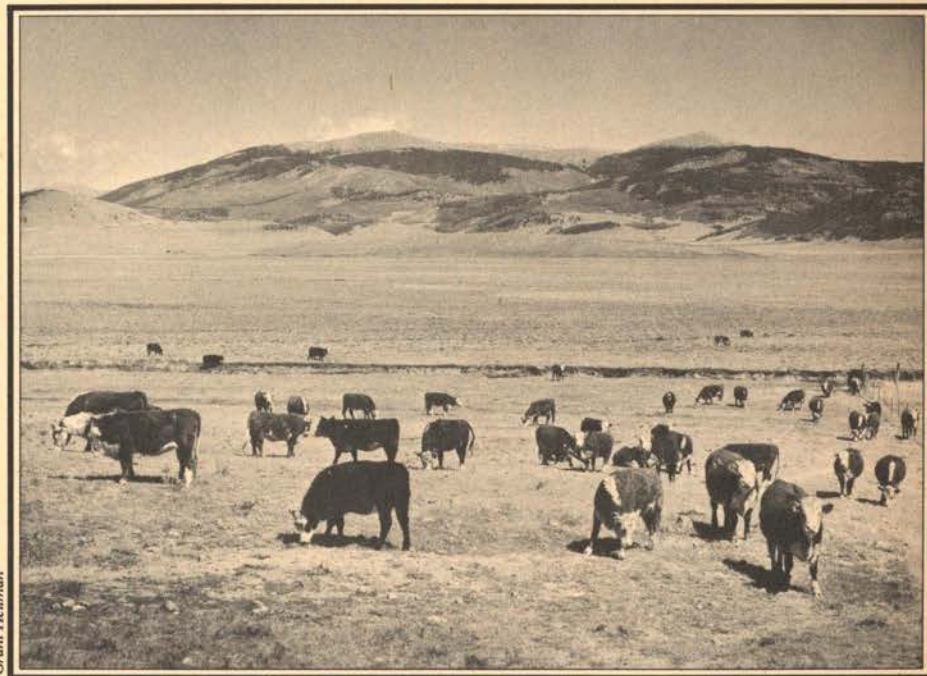
Michael McCloskey

One of the oldest idylls of the conservation movement in the United States is the quest for an ultimate model of wise stewardship or enlightened management of natural resources. One can harken back to the 1930s to remember familiar images in brochures issued by federal agencies—happy farms, neat forests, blissful wildlife, and busy dams and roads co-existing with each other and nearby cities in well-regulated contentment.

Forty years later, one can well ask whether that nirvana has arrived in the United States. Can a model of enlightened management be found here that can instruct the world? Are the biological resources of economic value in the United States being managed in an enlightened way?

The answer you get depends on whom you ask and what you ask about. Some overall environmental facts with respect to American forests, fisheries, ranges and croplands should be looked at to determine whether they suggest that much is really yet known about “enlightened management.”

With respect to wood products, timber in the United States is drawn largely from two sources. The major source is the wild forests of the western part of the country; a secondary source consists of exhausted farmsteads in the South that either reverted to woodland or were laboriously replanted. In both cases, the point to be made is that little is yet known from experience in North America about how to safely and successfully grow timber over many cycles in harmony with the environment. In the West, the last five percent of the virgin stands are being exploited, and they are being exploited on private lands at a rate that exceeds the growth of new timber. In the last twenty years in the Pacific Coast states, the inventory of timber on land owned by the large timber companies has declined by thirty-two percent and that takes into account new growth.<sup>1</sup> This means that their total amount of



Grant Heilman

standing timber of all types has gone down by almost a third. In Oregon, the leading timber-producing state, it has dropped by forty-two percent.<sup>2</sup> In the national forests, it is not declining so fast—only five percent in the same period.

The Library of Congress recently studied the situation for Congress. It found that in Oregon the timber industry is cutting its total stock at a rate *five times* the rate of growth of new timber. Under sustained yield, which all the companies claim to be practicing, the object is to cut only as much as you are growing! Obviously, they are not practicing sustained yield. The industry has only seventeen years' worth of virgin timber left in Oregon, only twenty-three years' worth in Washington state.<sup>3</sup> Looking ahead, the U.S. Forest Service did a study a few years ago that predicted there would be a further decline of sixty percent in the amount of timber available for the timber industry to cut on its lands by the year 2000.<sup>4</sup> Overcutting is occurring just as it always did, except that the timber industry is now more skillful in its denials. It spends vast sums on

advertising to convince the public that it is practicing sustained yield—that it is growing trees forever—until the very day that mills shut down and tree farms are closed.

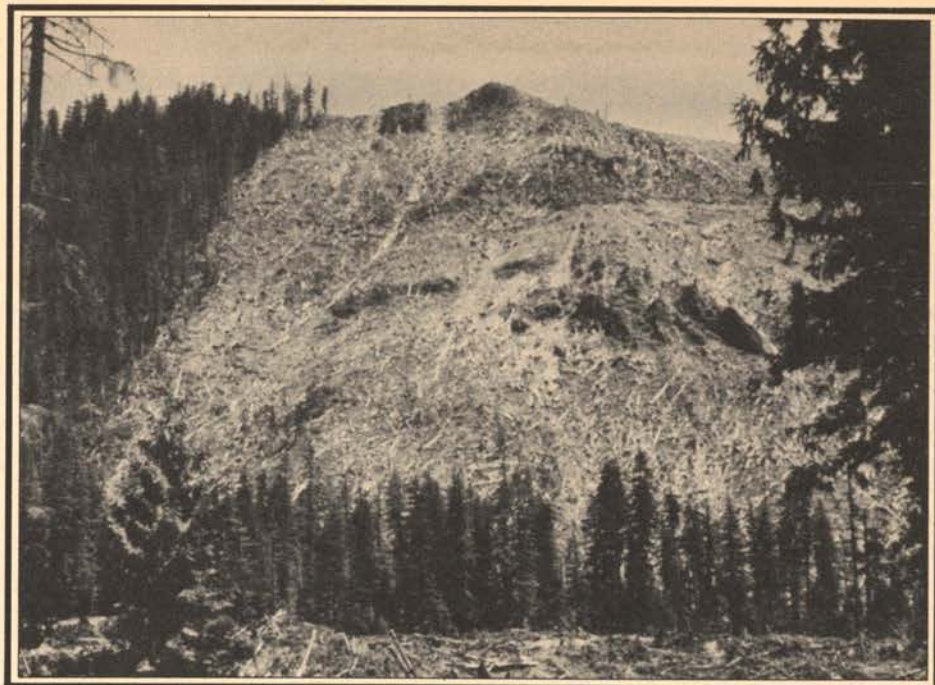
The situation in the national forests is shaped by what is happening on industry lands. While the story in the national forests is not so bad, the timber industry is frantically pressing the Forest Service to increase the allowable cut by as much as half again or more in the next few years. This is really a call for liquidation of the last forty million acres of virgin timber in the shortest possible time—based on the gamble that technology will save the industry, that new fertilizers and intensive practices will somehow make timber grow faster in the future. However, the industry is now applying fertilizer to less than one percent of its lands, and the price of nitrogen fertilizers is rising with skyrocketing energy prices and natural gas depletion.<sup>5</sup> These facts indicate that promises of future widespread increases in timber growth are just not credible. Where second-growth is now being harvested in the West, it is principally the result of natural

regeneration during a period of neglect after the virgin timber was taken. Nor can one look with equanimity at the prospect of widespread forest fertilization. Will this mean wholesale algal blooms in rivers and streams, thus hastening the aging of lakes and ponds? What will it do to aquatic habitat, and what general changes will it foster in floral and faunal relationships? Will it encourage insect buildups?

Looking at the overall course of U.S. forestry, one can discern a trend from the use of virgin timber first for firewood and then for lumber, to the use of second-growth for pulp, plywood, and particleboard, and then to the use of third-growth of declining size and distribution, as well as other woody materials, for silvi-chemicals. In other words, there is no real commitment to sustained production of timber for lumber. Instead, changing markets and increasing capital investments in mechanization are pushing the industry toward shorter and shorter growing cycles and more and more processing. In the meantime, the soil base is disturbed more often, producing more erosion. In many forests with fragile soils, soil is eroding at rates 100 to 1,000 times faster than it is being formed, suggesting that only two to six growing cycles are possible before all the soil is essentially gone.<sup>6</sup> There is also reason to fear that vital nutrients are being leached out of many sites as a result of rain wash after excessive clearcutting.

Many of the companies practicing this kind of forestry in the relatively resilient temperate-forest biome of North America are carrying their habits to the tropical forests of Brazil, the Philippines, and Indonesia. They have secured millions of acres of cutting concessions, and cutting rates have soared to forty times what they were less than a decade ago.<sup>7</sup> No one should look to these corporations for the know-how of managing even temperate forests well, let alone particularly vulnerable tropical forests.

Just as the timber industry is still largely exploiting wild forests, so also is the fishing industry still largely exploiting the wild fish stocks of the sea. With the development of factory ships, the world fish catch has tripled in the last two decades and may now be near the biological limit of the resource. The catch has been hovering at around 70 million metric tons throughout the



Grant Heilman

1970s, despite the increasing size of fish harvests.<sup>8</sup> In the process, more and more species formerly not utilized are now being taken. One-third of the catch is turned into fishmeal to be fed to poultry and hogs for the rich markets of the developed nations.<sup>9</sup> The move has begun to harvest krill in the Antarctic, with unforeseen effects on baleen whales, which depend on them. In the northwestern Atlantic, overfishing has cut the take of cod, herring and haddock in half in recent years!<sup>10</sup> Such pressure almost ruined the anchovy fishery off Peru.<sup>11</sup> The International Whaling Commission may only be trimming back the quotas on whales to match the decline-curve of seriously depleted species. Indeed, few of the international commissions that exist to protect fishery stocks seem to have the political will or means to bring about enlightened management.

Enlightened management may also remain more of an ideal than a reality on U.S. rangelands. The nitrogen cycle by which those rangelands were naturally fertilized with free-roaming cattle herds, and bison before them, has been broken, as most cattle are now raised in feedlots. Manures generated in these feedlots represent a major portion of the solid-waste burden of the nation, and as a misplaced resource pose a monumental water-pollution and disposal problem. Over eighty percent of all beef cattle in the U.S. now pass through feedlots.<sup>12</sup> Today, less than two percent of the cattle come off of

Western rangelands,<sup>13</sup> but over the course of time these rangelands have been badly degraded, many losing more than half their productivity. Today, only twelve percent of those lands are in good condition, with thirty-three percent in poor or bad condition, eroding and getting worse.<sup>14</sup>

Reduced pressure should allow many of these lands to begin recovery now, but reduced carrying capacity on degraded lands prolongs the controversies in many places. Ranchers resist reductions in stocking levels on public ranges; range-management agencies resist preparing environmental impact statements. There are increasing court challenges by environmentalists, as wildlife values are caught in the middle. The fencing required by supposedly more enlightened management systems, such as the "rest-rotation" system, blocks paths for migrating wildlife. Cattle numbers may be maintained while soil conditions are better protected, but migrating antelope, deer and elk lose out. As enlightenment continues to elude those who rely on natural rangelands, emphasis has shifted to intensively managed feedlots and the production of feed grains.

We do not see much that is enlightened in the so-called management of resources that regenerate naturally, but do we see it on American croplands? How enlightened is the state of American agriculture? From an environmental point of view, it looks less enlightened every day. In the last

twenty-five years, the rate of fertilizer use has increased eightfold, insecticide use tenfold and herbicide use twenty-fold.<sup>15</sup> While corn yields have tripled in that time, it has taken fifteen times more fertilizer to boost production to these levels.<sup>16</sup> Excessive fertilization can destroy natural organic materials in the soil, pollute streams with unwanted nutrients and contaminate water supplies. Moreover, natural gas, which is used to produce ammonia-based fertilizers, is in short supply, and the process of mining and manufacturing phosphate fertilizers poses many environmental problems. While there has been a heightened sensitivity to the dangers of indiscriminate use of insecticides—particularly persistent ones—nonetheless, sales of chemicals to control insects in agriculture continue to increase at a rate three to four times faster than the gross national product. Over 50,000 different chemical formulations are applied to cropland, and their effects are understood on less than one half of one percent of the life forms found here.<sup>17</sup>

With booming world markets, growing population and the rising cost of fertilizers, insecticides and energy needed for highly mechanized agriculture, American farmers are electing to abandon many of the soil-conservation measures they once practiced. The Soil Bank has been depleted. The cropland base has been expanded by over ten percent in the last three years by returning over 50 million Soil Bank acres to production.<sup>18</sup> Much of this fallow land had been planted to cover that was of benefit to wildlife. It is all gone now, but what is even worse, marginal, erosion-prone lands are being brought into production. On the Great Plains and in the Columbia Basin, sand hills are being planted to row crops that can be irrigated with electronically controlled, center-pivot irrigation systems, which can handle rough rolling country with minimum labor. However, these areas are subject to wind erosion, and groundwater supplies in semi-arid areas will be further drawn down, endangering riparian wildlife habitat. Despite these efforts to expand the cropland base, prime Class I farmland continues to be lost to urbanization every year. More than twice as much farmland is lost in this way as is normally gained, and usually lands lost are of better quality than those gained.<sup>19</sup> In the last twenty years,

more than 54 million acres of good farmland were lost in the U.S. to encroaching urbanization—housing tracts, shopping centers and freeways—or to energy developments—power plants, transmission lines, strip mines and reservoirs.<sup>20</sup>

There is even reason to believe that soil-conservation practices are less widely applied today than fifteen years ago. One study suggests that soil-conservation practices are adequate on only thirty-six percent of U.S. cropland.<sup>21</sup> Crop rotation is being abandoned in the Corn Belt for intensive single-cropping of corn and soybeans. Instead of sod-based rotations with legumes, fertilizers keep up the production, and more insecticides keep down the pests. A variation of this is being pursued on the Great Plains, where continuous single-cropping of wheat has become common practice; rotation and fallow periods are being dropped to capitalize on high world-wheat prices, and there is more fall plowing to control weeds. The result of these changes is greater danger of wind erosion and a new dust bowl. Seven million acres have already been damaged by wind erosion, and six million acres more are in danger.<sup>22</sup> Many of the shelterbelts are being pulled out, supposedly to take advantage of newer approaches in design, but in many cases really to free that land for tillage too. Important local wildlife cover will then be lost, and more wind erosion will result. Some of the windbreaks are being pulled out to consolidate holdings into larger and larger units to support the heavy costs of mechanization. This trend is particularly evident in Iowa, where contour plowing is also being abandoned. As a result, one-quarter of the state's farmland is now suffering from severe erosion. There are only a few offsetting trends, such as the adoption of minimum-tillage techniques, which now benefit about seven percent of U.S. cropland.<sup>23</sup>

In the main, however, the trends are not good. There are no food reserves anymore. The Soil Bank has been used up. Marginal lands are being put into production with center-pivot irrigation systems. Soil-conservation practices are being dropped, with production kept up by more fertilizers and pesticides. Water and wind erosion are growing once again, and wildlife habitat and welfare are suffering everywhere in the process. This seems to be



At Gerry our goal since 1946 has been to make your wilderness experiences thoroughly pleasurable. These 30 years of demanding leadership have set the pace for product innovation and quality. This year it's the new Mountain Ark.



**GERRY'S TENT**

The Mountain Ark: a new free-standing tent incorporating a boat floor, front and rear ventilation and (4) side pull-outs in a spring-loaded double A-frame design. Catenary cuts on all side seams. Double-slider YKK nylon coil zippers and reinforcements at all stress points. Brown floor. Sunset orange canopy, and khaki fly. 6 lbs., 12 oz.

**GERRY**

If there isn't a Gerry dealer near you, write for our catalog: 5450 N. Valley Highway, Denver, Colorado 80216.

Department SC

the response of American agriculture to heavy world demand and rising energy prices. Having committed itself to the ultimate in mechanization, it is now caught by its own inner logic in a ruthless search for efficiency, which leaves little place for the externalities of wildlife, soil protection, ecological stability, amenities, the virtues of the family farm and the needs of the future.

There seems to be even less place for such doctrines of enlightened management as "integrated pest management," a "systems approach to nutrient management," and market changes to de-emphasize meat in the American diet and thus free land to produce crops for human consumption instead of feed for livestock. Indeed, these approaches seem at this stage to be as much theories as anything. And the same may be said for "ecological forestry," "ecosystem management of fisheries, with optimum sustainable populations," and "balanced multiple use" in range and forest management. What is really known in practice about these methods? Where are the really good case examples of commercial significance? Where are the institutes that teach such systems, and the necessary

instructional manuals? Who knows whether these systems will work over large areas and long periods? With these notions, we may have the beginning of approaches that need to be pursued, but we hardly have a body of proven practice.

Thus, America's management of its renewable resources seems not to offer much of an example for the world to emulate. While superficially our resources may appear to be better managed than in many places, closer inspection reveals a curious pattern. Forest management really involves exploiting wild forests or the first revival of forests on long-abandoned farmland. Fishery management consists of joining in the worldwide rush to exploit wild fish stocks down to levels that trigger precipitous declines. A lot of rangeland management involves fussing over balancing the scales with respect to a resource that is being abandoned in favor of feedlots. And U.S. agriculture has been turned about from its historic preoccupation with surpluses to a frantic effort to push production up with ever more chemical and energy-dependent technology and expanded acreage, while attempting

economy by dropping soil-conservation practices. It is not a picture that inspires much confidence.

It does suggest that the rest of the world should go slowly in adopting American practices. Instead, we need new cooperative efforts to pump life into theories of "enlightened management," to flesh them out with a body of proven practices. It is time for countries that believe they are enlightened to join in funding applied research and demonstration projects to show that there is more than hope in these new approaches. We must show that there is clearly a better way that will really work. As we look ahead, we will never find a better time to begin than now.

SCB

NOTES

1. Forest Service, *The Outlook For Timber in the United States* (GPO, Washington, D.C., 1973), p. 241.
2. *Ibid.*
3. Report of Robert Wolf, Legislative Reference Service (1974).
4. *The Outlook For Timber in the United States, op. cit.*, p. 83.
5. *Ibid.*, p. 17.
6. Robert R. Curry, "Soil Destruction Associated with Forest Management and Prospects for Recovery in Geologic Time," *ASB Bulletin* (July 1971), p. 121.
7. Ned Andrews, "Tropical Forestry: The Timber Industry Finds a New Last Stand," *Sierra Club Bulletin* (April 1973), p. 7.
8. Erik P. Eckholm, *Losing Ground: Environmental Stress and World Food Prospects* (Norton, New York, 1976), p. 156.
9. *Ibid.*, p. 154.
10. *Ibid.*, p. 156.
11. *Ibid.*, p. 157.
12. Edward Groth III, "Increasing the Harvest," *Environment* (January/February 1975), p. 34.
13. See "U.S. Policy on Use of Public Lands Under Scrutiny," *Christian Science Monitor* (November 16, 1976).
14. Bureau of Land Management, *Range Condition Report* (Washington, D.C., January 1975), p. V.
15. Groth, *op. cit.*, p. 30.
16. *Ibid.*, p. 32.
17. *Ibid.*, p. 30.
18. Committee on Agriculture and Forestry, U.S. Senate, "Conservation of the Land, and the Use of Waste Materials for Man's Benefit," (March 25, 1975), p. 8.
19. Roger Blobaum, "The Loss of Agricultural Land" (Citizens Advisory Committee on Environmental Quality, Washington, 1974).
20. *Ibid.*, p. 32.
21. "Conservation of the Land. . .," *op. cit.*, p. 13.
22. *Ibid.*, p. 43.
23. *Ibid.*, p. 32.

**"This remarkable book...will be a benchmark against which our administration and future administrations will mark their success."**

—STUART E. EIZENSTAT, Assistant to the President for Domestic Affairs and Policy

# THE UNFINISHED AGENDA

## The Citizen's Policy Guide to Environmental Issues

A Task Force Report Sponsored by the Rockefeller Brothers Fund

Edited by Gerald O. Barney

"An important book. It should be widely read—and then its contents calmly and thoughtfully debated by affected decision-makers everywhere."

—LOUIS B. LUNDBORG, Chairman (retired), Bank of America

"For the citizen seeking the professional's view of both the important questions and possible avenues of solution, *The Unfinished Agenda* will be a valuable tool."

—LOLA REDFORD and RICHARD NAPOLI, Consumer Action Now, Inc.

"A major milestone in the environmental movement's efforts to focus public attention on the need for comprehensive, long-term programs to address population and environmental issues."

—ROY MORGAN, Executive Director, Zero Population Growth

"A strong answer to the technomaniacs who foresee the solution of all our ecological and economic problems with ease."

—ANTHONY WAYNE SMITH, President, National Parks and Conservation Association

\$7.95; \$3.95 paper T. Y. CROWELL 666 Fifth Avenue, New York, N. Y. 10019

# The Tall Grass Prairie: Vanishing Landscape or National Park?



Photos by Patricia D. Duncon

Native big bluestem and wildflowers in the Flint Hills of eastern Kansas. This 1,000-acre tract of virgin tall-grass prairie was donated to Kansas State University by the Nature Conservancy and is near the site of the proposed national park.

## Linda M. Billings

*"While I know the standard claim is that Yosemite, Niagara Falls, the upper Yellowstone and the like, afford the greatest natural shows, I am not so sure but the Prairies and Plains last longer, fill the esthetic sense fuller, precede all the rest and make North America's characteristic landscape." Walt Whitman.*

Few landscapes are more evocative of the unique aspects of American history and culture than the prairies. Indians, early explorers, sod busters, homesteaders, wagon trains, cowboys, cavalry, buffalo, antelope, elk, wolves, coyotes and eagles—all these and more lived in close association with the famous North Ameri-

*Linda Billings is a Washington representative for the Sierra Club.*

can Prairie. For those few left who remember it as it was, the grand sweep of grass and sky must have been awesome. At one time, the heart of America's inland sea of grass, the tall-grass prairie, stretched in a broad swath of 250 million acres from Canada to Texas and Indiana to Kansas. Now, only remnants are left, and these are fast disappearing.

Perhaps because we have thought of the prairie as such an integral part of the American landscape, it comes as a shock to us to realize that only very small parts of it remain in public ownership—as parts of wildlife refuges, in parks or as small research plots. We have no parks containing a large expanse of native tall-grass prairie. Development pressures, changes in land ownership and agricultural methods, and other threats to the last remaining stretches of tall-grass prairie make it imperative that we act quickly to establish a Tall Grass Prairie National Park.

The idea for a prairie national park probably was first suggested by artist and naturalist George Catlin, who visited the region early in the nineteenth century. He envisioned a great prairie park, complete not only with bison, pronghorn antelope, and prairie wolf, but also with native aboriginal peoples. The first specific proposal to preserve a large area of native grasslands has been attributed to Dr. V.E. Shelford, of the University of Illinois, who conducted research on animal behavior in the prairies. His proposal gained the support of the Ecological Society of America, and in 1930 he presented to the National Park Service his idea of preserving a representative area of the Great Plains. Between 1937 and 1975, the National Park Service and other federal agencies conducted studies and issued reports on possible grassland sites in Montana, the Dakotas, Colorado, Nebraska, Kansas and Oklahoma. These studies eventually focused upon the

Flint Hills, in Kansas and Oklahoma, the last remaining intact stretch of tall-grass prairie. Within the Flint Hills, three sites have been studied intensively by the National Park Service: Waubunsee and Chase, both in Kansas; and Osage, in Kansas and Oklahoma.

The Flint Hills, running north and south, offer wide, rolling vistas and are characterized by flat-topped hills, deeply dissected scarps and woody alluvial valleys. While they lack the flat topography and deep rich soils characteristic of "true prairies," their distinctive physiographic character does offer richer and more diverse natural and scenic qualities.

In addition to the traditional concept of a national park—that is, a contiguous large block of land under federal ownership and management—other alternative approaches have been suggested:

- (1) federal ownership of a core of prairie parkland that would be surrounded by a zone in which agricultural uses would continue and noncompatible development would be prohibited;
- (2) acquisition of scenic easements for lands on which compatible uses would continue; or
- (3) regional management through creation of a Flint Hills Agricultural Reserve, patterned after the British national park concept (with lands retained largely in private ownership).

The proposed park sites have met with a great deal of controversy at the local level, especially from ranchers in Kansas. Opponents have countered with proposals to establish the park on existing federal land (though none is suitable) or else to establish a Prairie National Parkway through the Flint Hills, acquiring easements for scenic overlooks and rest areas. Local landowners have argued that continuing ranching uses would better preserve the prairie.

The tall-grass prairie is a remarkably stable ecosystem, but once it is disturbed or destroyed, it is very hard, if not impossible, to reestablish. Gone, too, would be the way of life, the buildings, the artifacts and the potential archaeological sites, that could give future generations an understanding of their cultural heritage. The National Park Service sees a twofold purpose for a Tall Grass Prairie National Park: "to preserve and protect a relatively undisturbed portion of the national prairie environment, and to interpret its role in shaping the American culture."

At its inception, the national park system was envisioned as preserving outstanding scenic beauty or unique natural features. Gradually, the concept has expanded, and some of the more recent additions,



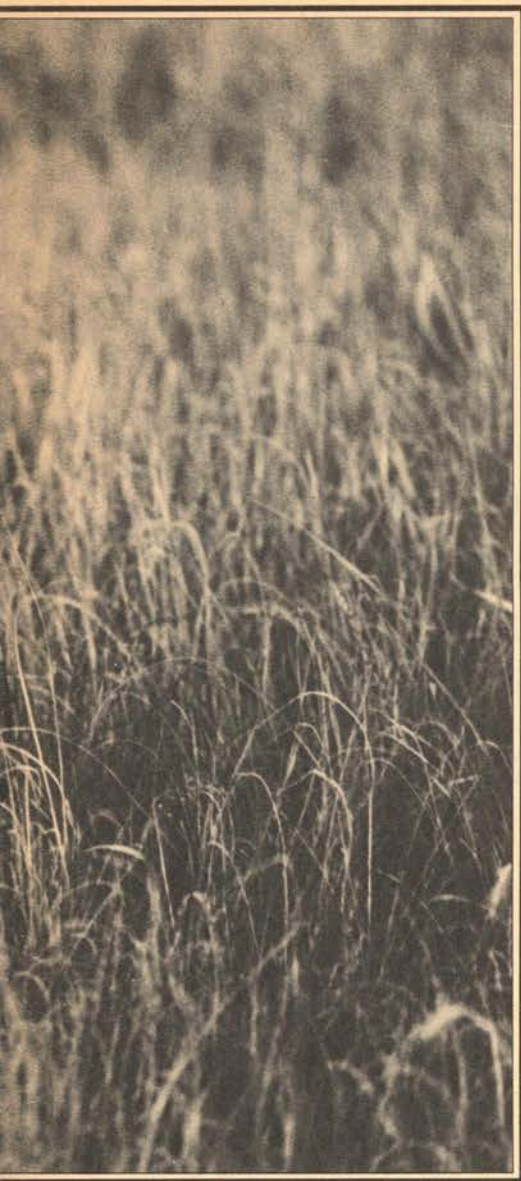
*Coyote in tall-grass prairie near Manhattan, Kansas.*

such as Big Thicket National Preserve in Texas and Big Cypress National Preserve in Florida, have been included because of their outstanding biological values. The National Park System Plan of 1972 set out a comprehensive proposal for completion of the system. It envisioned the expanded system as containing representations of the various natural regions of the country and of the natural history themes within those regions. The study revealed that there was very poor representation in the national park system of the Central Lowlands region, of which the original tall-grass prairie was a major portion. It was also found that there was little or no representation of the two primary natural themes of the tall-grass prairie—the landforms of plains, plateaus and mesas, and the grassland ecosystem. The National Park Service has said: "The national park system includes

no units with significant amounts of either tall-grass prairie or mixed-grass prairie in this large region."

At first glance, most people would wonder what could be so important about a lot of wild grass ("weeds," some would say). What makes the tall-grass prairie so special? What are its unique and compelling qualities? In some ways, it is not entirely unlike a forest, with its all-enveloping silence punctuated by occasional bird songs, a rustle of underbrush from a small animal or reptile, the whooshing sound of the wind. Yet, it also has the broad, expansive vistas characteristic of the ocean—gentle undulations of green as far as the eye can see, with a huge, vivid sky above.

Within this seemingly uniform environment exists a diverse and complex ecosystem. The dominant and distinctive feature is the native grasses: primarily big



feathers, sunflowers, black-eyed susans, asters and lupines. The prairies support hundreds of different kinds of plants.

They also support eighty species of mammals, which at one time included bison, pronghorn antelope, gray wolf, mountain lion and elk. Today, there are the deer, bobcat, coyote, fox, jack rabbit, opossum, muskrat, raccoon, badger, and many more. Over 300 species of birds are found there, including the prairie chicken, hawks, falcons, various waterfowl and an occasional eagle. Over 1,000 kinds of insects and other animals are also inhabitants of the tall-grass prairie.

The first human inhabitants of the prairie region were native hunters, who came there some 10,000 years ago. Later, farming cultures were established in the fertile river bottoms and valleys. At one time, the great Indian tribes of the Comanche, Kiowa, Gros Ventre and many others dominated the region. Later came the early European explorers such as Coronado, and still later, Lewis and Clark and Zebulon Pike. They were followed in turn by countless processions of trappers, miners and settlers going west over the Santa Fe and Oregon trails. The Homestead Act of 1862 brought still more settlers to the prairies, though they found the chert-laced soils of the Flint Hills too rocky for plowing and cultivation. Consequently, the area has been used mostly for grazing to this day. The great cattle drives of the late 1800s went through the Flint Hills. Millions of head of cattle were brought over the Chisholm and other trails from Texas and Oklahoma to the Kansas railheads. Where the early settlers once cursed those rocky, unyielding soils, we can now give thanks. For without them, there would not be any large expanses of tall-grass prairie left.

However, recent changes in the Flint Hills make us concerned about what the future might bring. Power plants, power lines and reservoirs encroach increasingly upon the landscape. Small towns are losing out to big cities, and today, many rural dwellers earn some or all of their living in surrounding urban areas. Economic pressures are forcing some pastures to be consolidated and turned over to corporations. In search of more winter-grass resources, some landowners are plowing up prairie pasturelands and planting fescues.

These pressures and more add up to the final assault on the great American prairie. Unless the public is moved to express its concern for the tall-grass prairie, and unless Congress takes action quickly, future generations of Americans will never know an integral part of their natural and cultural heritage.

blue stem, Indian, little blue stem, and switchgrass, variously reaching heights of three to eight feet. Failure to set aside a significant portion of the remaining tall-grass prairie could well mean the loss to the gene pool of these and other species, grasses that one day might prove invaluable to botanists and agronomists interested in developing new strains for forage or even human consumption. This reason alone is enough to warrant the establishment of a Tall Grass Prairie National Park. The tall-grass prairie of the Central Lowlands should not be confused with the short- and mixed-grass prairies of the Great Plains region, to the west, though combinations of tall, mixed and short grasses do exist. The tall grasses generally require more rainfall and richer, deeper soils. Throughout the spring, summer and fall, wildflowers are everywhere, including gay-



**MSR STOVE**  
Powerful Lightweight

GORE-TEX® Rainwear, Tents,  
LITHIUM Batteries, Lo-o-ng  
Polarguard® PARKAS  
Ice Axes

Life

**MOUNTAIN SAFETY RESEARCH**  
628 South 96th  
Seattle 98108



Free Catalog

GALAPAGOS-Cruise in the Archipelago,  
encountering unique wildlife with  
naturalist guide. Only 3 departures left.

**Mountain Travel**  
1398 Solano-SC71, Albany, CA 94706 (415)527-8100



**CRMS COLORADO ROCKY MOUNTAIN SCHOOL**  
coed grades 10-12 college prep

A Senior Apprentice Program, special projects period, an introductory Wilderness Session for new students, and trips to the mountains and Canyonlands complement the traditional curriculum.

Admissions Box S, CRMS, Carbondale, CO 81623 (303-963-2562)

Free  
Outdoor  
Catalog

Endorsed  
by the  
experts.

Get REI's free outdoor catalog with over 1600 top quality items for outdoor people. You'll find gear and clothing for mountaineering, backpacking, camping and more. AND it's all available at low REI Co-op prices.

For a one-time \$2.00 membership, you'll get all our upcoming catalogs and an annual dividend on money you spend at Recreational Equipment. Last year \$1,900,000 was declared in dividends to our members.

Use coupon or call toll free for your catalog (800) 426-4840, except Hawaii or Alaska. Washington residents call (800) 562-4894.

I want to be a MEMBER Enclosed is \$2.00.  
 Please send me FREE color catalog only.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_ ZIP \_\_\_\_\_

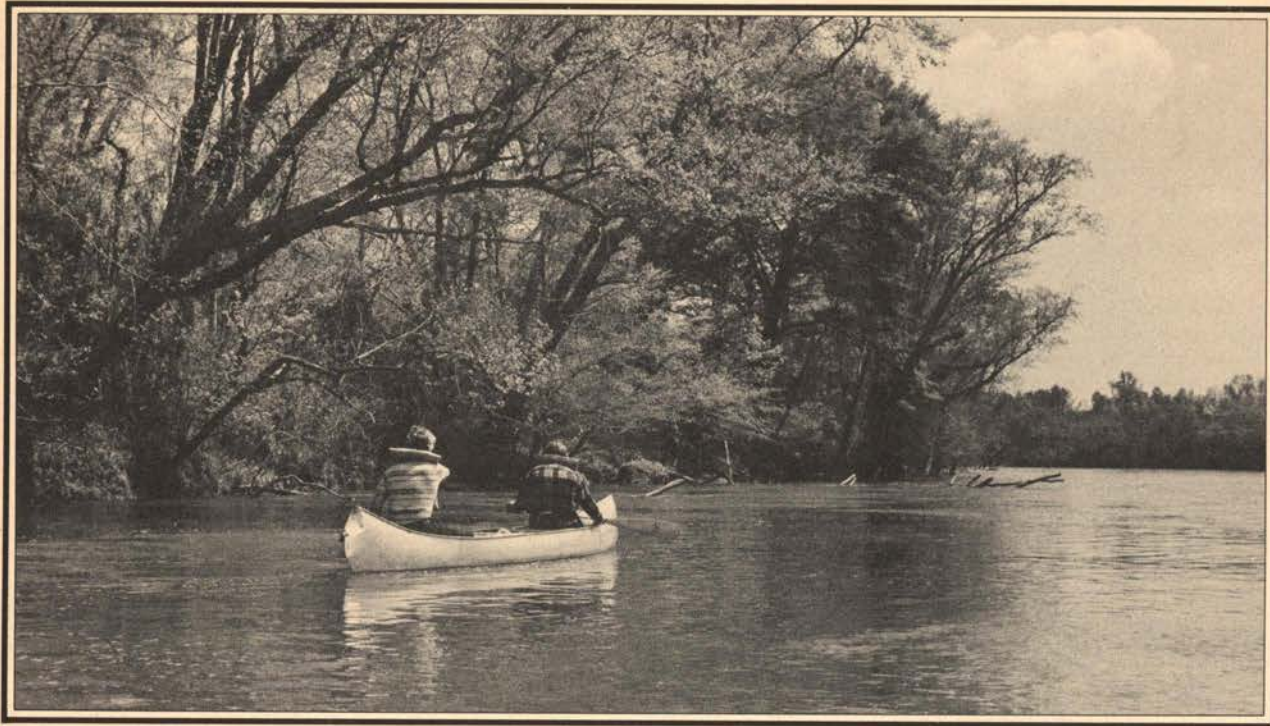


SB-4-C

RECREATIONAL EQUIPMENT INC.  
Seattle • Portland • Berkeley • Los Angeles  
The Original Outdoor Co-op-Est. 1938®  
P.O. Box 22090, Seattle, WA 98122

SCB

## Southeast: Controversy on the Savannah



Stuart Johnson

In November, 1976, eleven citizens' groups, including the Sierra Club, the National Wildlife Federation and the South Carolina Environmental Coalition, filed suit in federal court to halt construction by the U.S. Army Corps of Engineers of the Richard B. Russell Dam and Lake on the Savannah River, which forms the border between Georgia and South Carolina. It now appears that the man elected to the presidency in that same month may beat environmentalists to the punch. In the 1977-78 budget submitted to Congress in February, President Jimmy Carter deleted funds for nineteen federal dams and water projects opposed by environmentalists. Among them was Richard B. Russell Dam and Lake.

Carter had made a reputation as a dam breaker during his tenure as governor of Georgia, but even so, his early effort to continue this personal tradition came as something of a surprise, if only by virtue of its magnitude. How many of these proposed deletions will withstand the affection for pork barrel traditional in Congress remains to be seen. In most cases, members of Congress from states and districts affected by the deletions will probably attempt to exempt their pet project from Carter's cuts, and trade-offs among the delegations of various states would not be surprising. Yet as such things go, the

Richard B. Russell Dam and Lake is a particularly misguided endeavor, and its unique blend of disadvantages may persuade this Congress as they have no other.

The project site is a thirty-mile stretch of the upper Savannah River between two existing corps reservoirs—Hartwell and Clark Hill. This is the only portion of the upper Savannah that is still free-flowing. Adjacent lands in both South Carolina and Georgia are highly productive for crops and timber and provide valuable wildlife habitat.

Corps officials are already acquiring the needed 56,000 acres for the project. Of these, 26,000 acres would be flooded. Much of this property is now owned by a number of families who represent that rapidly vanishing American tradition, the family-owned and-operated farm. Some of these people cultivate land that has been in their families for over a century, and they doubt that whatever the government gives them in compensation for their land will even begin to pay for the loss of not only their livelihood but their way of life as well.

Since the upper Savannah does not qualify for Wild and Scenic River status, the Corps of Engineers maintains that little would be lost by the construction of the dam and reservoir. In today's complex society, however, a river need not be "wild and scenic" to be valuable. That this thirty-mile section exists in a relatively natural and unpolluted state is reason

enough to think carefully before destroying it, especially since the rest of the upper Savannah has already been lost to dams.

Deer, turkey and small-game species make the river valley popular with hunters. Record-sized rainbow trout have been caught in the ten miles of river below the Hartwell Dam. These waters constitute half of South Carolina's flowing freshwater trout fishery. In addition, the well-oxygenated water of the upper Savannah feeds into Clark Hill Reservoir and is in large part responsible for that lake's nationally famous bass fishery. Canoeists, photographers and hikers find that the area's splendid combination of solitude and natural surroundings serves to enhance these activities.

Completion of the Russell project would, along with existing lakes Hartwell and Clark Hill, create a mega-reservoir 120 miles long and would completely eliminate or severely degrade the valuable resources of the upper Savannah River. These irreplaceable human and natural values have been dismissed by the corps as being "of little significance," but if anything connected with the Russell controversy lacks significance, it is the set of benefits the corps claims will result from the project. These supposed benefits typify corps procedure for justifying their projects. The results of their benefit-cost analysis are particularly suspect as evidenced by the fact that the Richard Russell Dam was one



of seven corps projects cited by the General Accounting Office in a 1974 report to Congress criticizing the inaccuracies of the benefit-cost system. Governor Edwards of South Carolina summed up this aspect of the Russell controversy: "The huge and increasing cost of the project seems far more than the amounts of benefits derived."

Seventy-four percent of the "benefits" claimed for the project consisted of hydro-power. Repeated attempts by the corps to use the recent energy crisis to promote the Russell project do not disguise the fact that such peak-power facilities as the Russell project are incapable of handling America's future power needs. The corps would have us believe that the Russell facility is a timely, carefully planned solution to the needs of today and tomorrow. Actually, it was originally conceived by Congress under a different name, Trotters Shoals, in the 1944 Omnibus Rivers and Harbors Act. Thus the corps continues its policy of rounding out its huge backlog of out-of-date projects even though they have little or no application to present needs.

Savings in the cost of electricity as a consequence of the dam would be minimal. A study by Clemson University economist James Stepp shows that each of the 800,000 South Carolinians who use electricity distributed by Southeastern Power Association, which would sell the electricity from the dam, would save \$1.30 per year if the project were built. Such negligible savings do not make up for the environmental waste the project would bring with it.

Even the addition of pumped storage, now advocated by the corps, would not substantially alter the situation. Though pumped storage would double the 300,000-kilowatt output of the facility, the result would be a net loss of electricity due to the enormous amount of power needed to pump water to the top of the dam in preparation for recycling it through the generators.

The estimated cost of the facility has increased from Congress's original allocation of \$84 million in 1966 to a current figure of \$248 million. Pumped storage, if added, would cost an additional \$72.5 million. Since the Russell project is not scheduled for completion until 1985, it is certain that continuing inflation would further increase the ultimate cost.

The purported recreational benefits of the project, which constitute nineteen percent of the corps' projected benefits, duplicate the already extensive flatwater recreational opportunities provided by Hartwell, Clark Hill and other lakes in South Carolina and Georgia. Moreover, the Bureau of Outdoor Recreation has said

that any additional flatwater recreational needs for the states "could and should be accommodated by further development of the existing reservoirs."

The one percent fishing benefit projected by the corps is highly questionable because the Fish and Wildlife Service has said the Russell fishery would be mediocre and it has expressed concern that the oxygen-deficient water of the new reservoir could lead to a decline of the excellent bass fishery at Clark Hill Reservoir downstream. Also, the oxygen-injection equipment the corps claims will increase the oxygen content of the water has already failed at Table Rock Reservoir in Arkansas.

The corps lists flood control as one percent of the projected benefits, yet common sense dictates that establishing a permanent 26,000-acre flood between two huge reservoirs is not a practical approach to flood control.

The remaining five percent of the projected benefits for the Russell project consist of area redevelopment. Here the corps would have us believe that their project is the answer to financial problems in surrounding areas, but the record of other corps projects does not bear out this contention. For example, the same

claim was made for McCormick County, South Carolina prior to the construction of Clark Hill Reservoir, but the county has continued to lose population since the dam was completed.

Both environmentally and economically, the Richard B. Russell Dam and Lake calls for huge investment, but promises poor returns. Though land acquisition and diversion-canal construction have already begun, there is still time to stop the project before irreparable damage is done.

You can become directly involved in the fight against the Russell Dam by contacting the Upper Savannah River Defense Association, Box 5761, Columbia, S.C.

On March 18, Representative Butler Derrick (D-South Carolina), in whose district the Russell Dam is to be sited, announced his agreement with President Carter that the Russell Dam is of questionable enough value environmentally that further funding should be stopped until the project is studied further. The President is committed to deletion of selected dams and water projects, including the Russell Dam, from the 1977-78 budget. We encourage all Sierra Club members to write their senators and congressional representatives in support of this deletion. SCB

## Boost your wildflower IQ.

Walking in the woods or fields of the Northeastern and North Central United States, you may encounter any one of 1,375 species of wildflowers. Yet with Lawrence Newcomb's amazing new system, you can identify any specimen in less than thirty seconds!

### It's as easy as one, two, three

1. Determine the flower type from among eight choices (digit one).
  2. Determine the plant type from among six choices (digit two).
  3. Determine the leaf type from among four choices (digit three).
- Look up this three-digit number in the Locator Key and follow the key to determine the page where your plant is described and shown. No knowledge of botany is required.

ELIOT PORTER: "I have tried Newcomb's key on flowers I know and have been delighted by the ease with which they can be identified."

Endorsed by The Massachusetts Audubon Society and The Garden Club of America.

1,284 beautiful, accurately detailed illustrations, including 32 pages in full color.

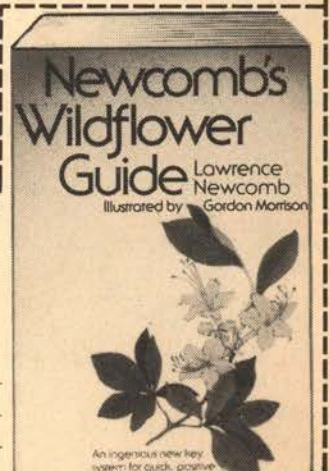
512 pages, waterproof cover, pocket size  
\$6.95 at all bookstores or use this coupon;

SCB-1

M. C. DeLamarter  
Little, Brown and Company  
34 Beacon St., Boston, Mass. 02106

Please send me \_\_\_\_\_ copy(ies) of NEWCOMB'S WILDFLOWER GUIDE at \$6.95 each, plus 50¢ for postage and handling. I enclose  check  money order in the amount of \_\_\_\_\_ including local taxes where applicable. Please allow three weeks for delivery. Order number 0316604410.

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_



## Washington, D.C.: The Cocktail Party

Brock Evans

The cocktail party, a standard part of the Washington scene, is in many ways a necessary part of the political process. Here, away from the tensions of the pressure-cooker existence of official Washington, lobbyists, politicians and Administration officials mingle and relax in a more convivial atmosphere. Because such functions usually require a "donation"—often up to \$100 per person, which comes out of my salary—I cannot afford to go often. But they are worth going to as often as possible, because they provide one of the best ways to meet influential people, to get information and to present our views to them effectively.

One particular party carried a special tingle of excitement, for the election had been held, and the new President had just come into power. Hosted by an influential senator, this reception was held for the purpose of meeting the Vice President, so it was even more certain that nearly everybody whose name and influence counted for something would be there.

By the time I arrived, the crush of people was so great that it was hard to work my way to the free bar to get the obligatory drink to hold in my hand. The babble of conversation grew louder, and I looked for someone I knew. I spotted a lobbyist for the timber industry, and we exchanged banter about the recent forestry campaign.

As I stood with him, he introduced me to his wife. "I've seen you somewhere before," we both said—and then I realized where we'd met. She was the personal secretary to one of the most influential senators, whose actions every day affect our interests.

While I was still digesting that bit of startling information, a prominent labor lobbyist struck up a conversation with my friend. I overheard snatches of it: "He was desperate during the election campaign, so I gave him \$5,000 . . . he called up the other day to ask what we wanted, and I just told him to go on out and have a nice dinner."

Several other noted politicians approached my timber-lobbyist friend with loud cries and backslaps, and I wandered on through the crowd, greeting friends, exchanging scraps of news. When I recognized various politicians and officials, I introduced myself and discussed new legislation for the next Congress. One promised speedy action on a bill in which we were interested. Another told me he had problems with a certain proposal, and requested more information. With another, there was a discussion about the possibility of oversight hearings on a bill that had been passed last year.

I saw industry lobbyists everywhere, huddling with labor officials or converging upon powerful senators, engaging in earnest conversations with them. I didn't see

another environmentalist there.

Abruptly, the crowd became silent, as the host-senator introduced some of the distinguished guests. Then he made a speech praising the Vice President, who, in turn, made a speech praising the senator. And then the party began again, with renewed zest.

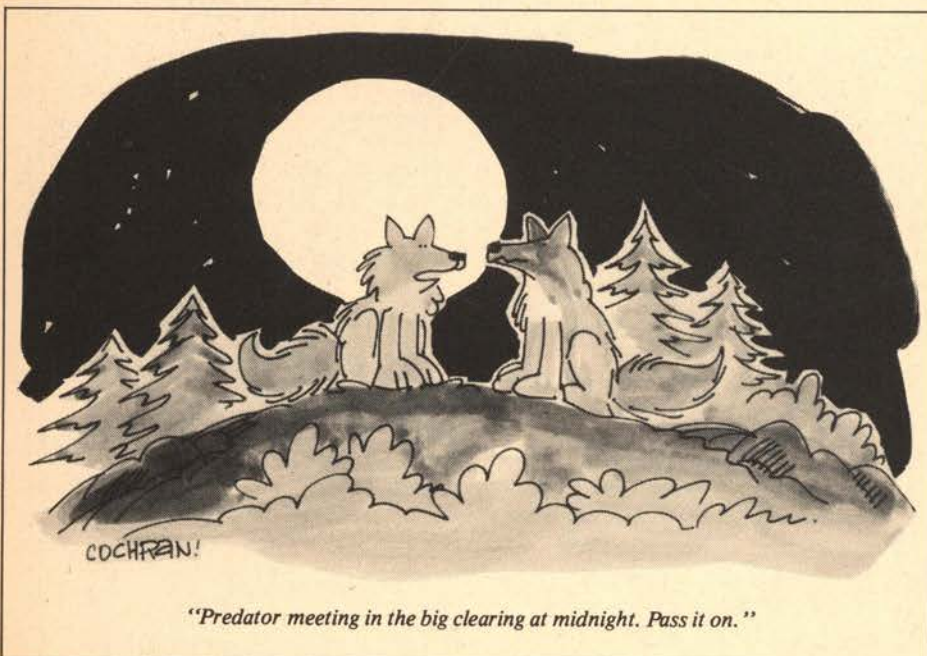
As I walked out later, having also done my part, I thought again: We must never forget that this is a large part of the Washington scene. It is the world of money and power—or, more accurately, the world where money *is* power. The lobbyists and the politicians, the great and the near-great, all vying for special attention, accepting and giving favors . . . this is how it is done. Though this is a world we do not often see, and thus perhaps ignore, we must never forget that it does exist. And we must learn to deal with it.

I had the same feeling then that I had several years before, in Prudhoe Bay, Alaska. At that time, I became aware of the awesome complex of machinery and buildings. It represented an immense display of the money and power of the oil industry, whose tentacles reached all over the world. I remembered thinking then, as I thought now, "It's a good thing we didn't know directly about all that money and power when we were fighting the oil pipeline . . . if we had, it might have been too depressing, it might have made us less willing to fight."

But then, this is not the only world, is it? No. And that is why we survive and flourish. All that money, power and vying for influence are only one side of the Washington scene. The other side is where we are. It is the work that goes on day in and day out, across the country; it is the positive work of saving the earth. Earlier that very day, several of us had worked with devoted officials in the outgoing Ford administration. Together, we had just lobbied through a federal grant to save 1,300 acres of magnificent unspoiled beach on the eastern end of Long Island, known as Napeague.

Thirteen hundred acres of beach saved easily balances all that display of money and power at the party. Multiply this every day by the work of our devoted members and others around the country—2.5 million acres alone made safe last year—and all the parties in the nation recede into perspective. Yes, we play the game because that is what it takes; but we will never stop saving the earth.

SCB



## From Sierra Club Books: Kid Stuff

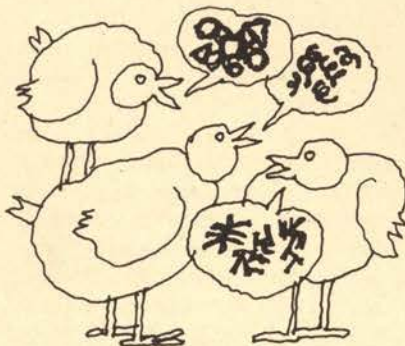
Jon Beckmann

One of the ongoing aims of the Sierra Club Books program since its move from New York back to San Francisco has been to expand the scope of its beginnings. The camera and the backpack were the principal tools then; the emphasis was on wilderness revealed and wilderness experienced, in the forms of the large pictorial book and the trail guide. Essentially the goal was, and remains, to reach the uncommitted and to bring the values of wilderness to an unaware public or to bring that public to the wilderness. Among that prospective constituency however, there is a significant number to whom no Sierra Club Book was addressed—namely, young people. This May, Sierra Club will launch publication, in conjunction with Charles Scribner's Sons, of a line of juvenile books. The program for young people will be, like the adult line, as diverse in format and environmental theme as the interests of those it aims to reach. There will be books that inform, that appreciate, that imagine—but each will attempt to bring to young readers a sense of the magical relationships of the natural world of which they are a part. The books will be based on the principle that learning is particularly effective when it grows out of a child's natural curiosity, and will provide the means for exploring the realm of interest that inspired Thoreau, Muir and Leopold.

For 1977 we introduced a calendar and almanac for young people called *What the Forest Tells Me*. The response was encouraging; the calendar was sold out within months. Each year the calendar for young people will focus on specific subjects from the natural world, the theme of the 1978 calendar being small creatures.

*A View from the Oak*, by Herbert and Judith Kohl, the first of our juvenile titles, introduces the reader to the world as experienced by other creatures—creatures as alien as the paramecium and as familiar as the domestic dog. The perceptions and behavior of animals in their natural habitats—in essence, the science of ethology as pioneered by Konrad Lorenz—are ex-

*Jon Beckmann is the director of Sierra Club Books.*



plored in this book. These other-than-human universes discovered by ethologists are described in fascinating detail, and experiments, games and marvelous illustrations allow the reader to enter the perceptual world of creatures with whom we share the planet.

Also on the first list of juvenile books is *My Garden Companion: Backyard and Vacant Lot Farming and Flowering* by Jamie Jobb. It is the most comprehensive guide to gardening available for young people. The aim is not only to grow a chemical-free crop of food-stuffs and flowers, but to nurture in the gardener a reverence for the act of growth. It includes information on seasons, climate, soil, insects, and a vast array of plants from popcorn to peanuts, dill to daffodils—all intended to help the reader not only use but understand the processes of growth.

The third title coming in May is *The Sierra Club Summer Book* by Linda Allison. Summer vacation is always a youngster's school-year daydream, but by a week or so into July boredom too often sets in. This book is the remedy. It is chock-full of information about the season of summer, natural history in city and suburb, conservation projects, science experiments, things to send away for, games, crafts, and a season's worth of other activities—most educational and all fun.

These books are being published in both hardcover and softcover editions and will find their way, we hope, into the hands of librarians, teachers, parents and, of course and ultimately, young readers whose first contact with the Sierra Club may be a book.

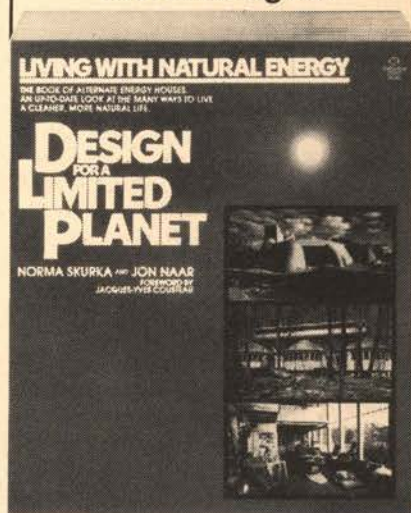
## SUMMER CAMP— FOR KIDS, IT'S PART OF GROWING UP

For thousands of kids, summer means going to camp. Youth camping has become an American tradition, and YMCA Camp Martin Johnson has been part of this tradition for 50 years. Located in the heart of Michigan's beautiful Manistee National Forest, the camp offers a wide variety of activities for boys and girls 8-16 years old. Guided by experienced instructors, campers attend daily classes in skills of their choice, including swimming, boating, canoeing, sailing, archery, baseball, volleyball, tennis and crafts. In addition, the camp offers horseback riding and the chance to explore 300 acres of wooded trails. Special canoe trips this summer range from one- to four-day excursions on some of Michigan's best canoe streams, as well as two extended trips on Canadian rivers. YMCA Camp Martin Johnson offers a choice of one-, two-, three- or four-week camping periods. Fees average \$95 per week.



For further information and a free color brochure, call the camp office (312-324-5300) or write to: YMCA Camp Martin Johnson, 1400 E. 53rd Street, Chicago, IL 60615.


An exciting, provocative  
look at life without  
fuel shortages!



By NORMA SKURKA and JON NAAR  
Foreword by Jacques-Yves Cousteau

In this essential idea book for all who would like to live a cleaner, cheaper, more natural life, the authors explore a full range of alternate energy lifestyles for both city and country. Illustrated with photos and diagrams.

\$5.95 wherever paperbacks are sold.

 BALLANTINE BOOKS

## America's Beleaguered Coasts

Continued from page 8

or a new coal port might enhance the beauty of its fair city.

Furthermore, under a complicated formula based on the amount of OCS activity that takes place off their shores, coastal states will be entitled to receive outright grants from a \$50-million fund to be appropriated annually between 1977 and 1984. It is hard for even the most trusting mind to bury the suspicion that the formula grants are a barefaced effort to buy off opposition. In fact, several news stories about the amendments headlined them as the "OCS Aid Bill." Another \$50 million is to be granted to the states for planning the siting, construction, expansion or operation of new or expanded energy facilities affecting the coastal zone—any kind of energy facility, including power plant and nuclear-fuel processing. The theory here is that with proper planning any kind of energy development can be accommodated somewhere. The community trades mangroves or estuaries for lights in the city. The worm in the planning apple,

as California is discovering with Alaskan oil ports and LNG terminals, is that sometimes no one is willing to trade anything.

In the end, though, planning is better than no planning, and coastal people who do not get involved in the planning process have no one but themselves to blame for lost coastal values.

### Exploited fisheries

Office of Coastal Zone Management regulations regarding impact funding are now running into criticism from framers of these amendments, and new legislation may be needed to clear up ambiguities in the statute.

An appealing carrot written into the Coastal Zone Management Act is its "consistency provision," the requirement that after a state's coastal-zone management plan is approved—and that assumes every federal agency base has been touched by the planners—all federal activities must conform to it except in the rare case when the Secretary of Defense may decide that national-security interests must override the state's intent. In theory, states could use this provision to veto federal OCS activity off their shores, but in

the real world states will probably use it to bargain for special lease stipulations to protect critical areas, diversion of pipeline landfalls from beaches and wetlands, and similar ameliorative measures. Unless leasing schedules are considerably slowed, OCS development will be well along before most states complete their CZM plans.

In any case, since the Department of the Interior's present plans call for undertaking pipeline-corridor-management studies only *after* an oil strike has been made, states will need a crystal ball to plan, in advance, accommodation for the industrial activity and land use that would be associated with an OCS pipeline landfall.

An underutilized part of the CZM Act is the provision for establishing an estuarine-sanctuary program for research purposes. States are to pay half the cost of protection for undamaged estuaries typical of each major coastal ecosystem. Applications have piled high on the desks of overworked OCZM staff. So far, only Coos Bay, Oregon; Sapelo Island, Georgia; and Waimau Valley, Hawaii, have been established. Rookery Bay, Florida, is on the 1977 budget request.

A similar program with a broader scope, set up under the Marine Protection, Research and Sanctuaries Act, has been similarly understaffed, underfunded and underdeveloped. Through the administrative shuffling of funds, the Monitor Sanctuary off North Carolina and Key Largo in Florida have been established. Further action is delayed while OCZM obtains a study of how the federal agencies can cooperate in the selection and harmonious management of sanctuaries.

Fortunately for the Pacific states, either resistance to management of coastal development has been weaker than on the Gulf or Atlantic, or the coastal consciousness of its residents has been higher. Washington's plan has been approved, while Oregon and California are close to the final stage of preparation. A segment of the latter plan, applying to San Francisco Bay, has been submitted to OCZM. It is based on management efforts the San Francisco Bay Conservation and Development Commission has been making in the Bay Area for several years. California's new state Coastal Act has already persuaded Exxon to load tankers with oil from its Santa Ynez unit in Santa Barbara Channel at offshore platforms rather than pipe the oil

## Research Notes

Analysis • Facts • Data • Source Materials

### THE RICHNESS AND VARIETY OF LIFE

Sierra Club Research Notes announces publication of a special 12-issue series devoted to the preservation of biotic diversity. The series is intended for the general reader and professional alike, for professors, students and anyone who's just plain interested. Each number in the series will be thoroughly documented. They are issued irregularly, (at least once a month), and are 2 to 4 pages in length.

#### Topics in Series

- The Sources of Biotic Diversity
- Diversity and Stability
- Threatened and Endangered Species
- Critical Habitat
- Nongame Management Techniques
- Wilderness and Natural Areas
- Island Ecosystems
- Ecological Stress
- Fragile Ecosystems
- And more.

Research Notes are also published on numerous other topics. Send a stamped, addressed envelope for a sample copy, or subscribe (coupon below).

#### PLEASE SEND ME

- The next 12 issues of Research Notes for \$10 (various subjects).
- The entire series on Ecological Diversity only (12 issues) for \$10.
- The next 25 issues of Research Notes for \$20.

I enclose a \$\_\_\_\_\_ check or money order, made payable to "Sierra Club Research."

Name (please type or print) \_\_\_\_\_

Address \_\_\_\_\_

City or town \_\_\_\_\_

State or province \_\_\_\_\_

Zip Code \_\_\_\_\_

Sierra Club Research Program, Post Office Box 7959, Rincon Annex  
San Francisco, California 94120.

through state waters to onshore terminals.

But all regulatory legislation requires implementation. Celia Von der Muhll, the Sierra Club's Northern California Coastal Coordinator during the campaign to pass protective state legislation, has said, "this new phase of activity will require an even greater degree of organization and commitment to coastal protection by environmental groups than during the four years of Proposition 20." What is true for California will be equally true for all states following approval of coastal-zone-management plans.

To supplement the CZM Act, passage of amendments to the Outer Continental Shelf Lands Act, narrowly defeated in the last session of Congress, is much needed. They would give the federal government authority to cancel leases if environmental harm is discovered, an essential option as long as leases are sold long before federally funded assessment of risks is completed. They would give the states the opportunity to disapprove development plans for leases, increase public availability of geological and geophysical information, and transfer environmental studies from the Department of the Interior to the Department of Commerce's National Oceanic and Atmospheric Administration, thus putting promotion of OCS leasing and study of constraints in different departments. In the present session the bill faces the full weight of industry opposition.

Sierra Club efforts to reduce oil spills by improving Coast Guard regulation of oil tankers under the Ports and Waterways Safety Act of 1972 have been disappointing, as the recent series of tanker disasters dramatized. After years of promises, the Coast Guard produced final rules that required neither the double bottoms that would prevent *Olympic Games*-type spills following groundings, nor adequate steering and stopping capacity. New legislation has been filed by Senator Magnuson of Washington, and an interagency oil-pollution task force has been appointed by President Carter to expedite improved regulation.

The threat of oil spills from super-tankers is compounded by lack of a comprehensive national oil-spill-liability law. A single liability procedure should be established as soon as possible to replace a confused set of international, federal, and state laws. Two goals to aim for are: legislation assess-

ing clean-up and damage costs to the spiller that are sufficiently high and unavoidable to motivate retrofiting of oil tankers (the glut of tankers on the world market probably precludes new construction for many years) and a national law requiring the recycling of used lubricating oil which is as much needed as improved tanker regulation and oil-spill liability legislation.

#### *Lost farmland*

The Clean Air, Ocean Dumping, and Federal Water Pollution Control acts (FWPCA) can also be forceful tools for protecting coastal values if damaging amendments are not passed by this Congress. A region's air quality may already be so poor that it cannot legally accommodate another energy installation. Similarly, estuarine waters may be too overstressed to bear added thermal or toxic effluent. The Army Corps of Engineers, under Section 404 of the FWPCA, may rule against dredging and filling on upland drainage systems as well as tidal flats. Environmental impact statements required under NEPA for federal facili-

ties may, with strong community support, provide a successful argument for alternative siting.

Not to be overlooked is the possibility of persuading a friendly member of Congress to sponsor federal purchase of threatened coastal wilderness for a National Seashore or Wildlife Refuge, or to create one out of bits and pieces, as the New York Gateway National Recreation Area was created around a bird sanctuary and an abandoned air field. A recent study by EPA has suggested a nationwide system of wetland reserves to be established as a "critical margin of safety" for wetland species and ecosystems threatened by construction.

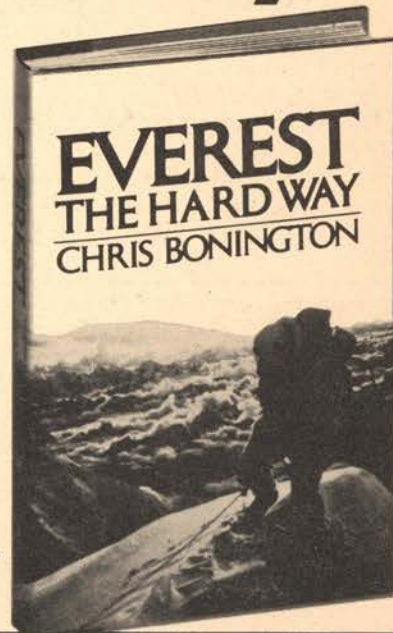
Saving a continental margin under siege is not a task for people who discourage easily. Unless enough determined people, the kind who join the Sierra Club, lead the effort to stop the destruction of beaches and estuaries, the degradation of air and water quality, and unplanned urban coastal land use, even the farthest mountains and the most remote forests cannot compensate us for the consequences. SCB

# EVEREST-- The Hard Way...

Here is British climbing star Chris Bonington's breathtaking, personal account of the first successful assault on Mount Everest's deadly South West Face. It's the chronicle of an epic battle against monsoon gales, sudden avalanches and hazardous ice, with 64 pages of breathtaking, full color photos, plus maps, charts and diagrams—a real life saga with few parallels in adventure, danger, and beauty.



\$12.95, now at your bookstore  
**RANDOM HOUSE**



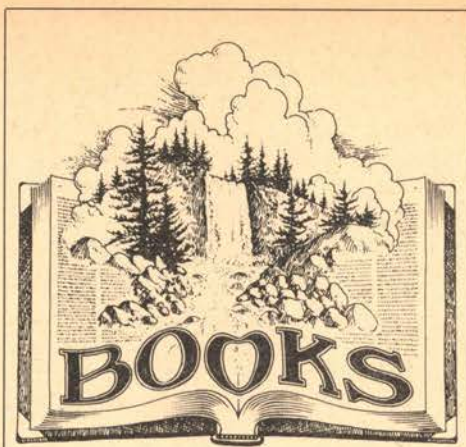


The age demanded an image of its accelerated grimace," wrote the poet Ezra Pound about the twentieth century. Indeed, the exhausting speed with which "progress" propels us and the sense of helplessness and anger many people feel as a result are well known, having been repeatedly chronicled over the past several decades. Now, however, instead of merely complaining or resigning themselves to the difficulties of the age, many people are searching for practical steps they can take to protect their families from stress, pollution and related diseases, the byproducts of our brand of prosperity. To serve this newly felt need, publishers and writers have turned out a huge number of books in recent years devoted to alternative life styles and self-help projects, ranging from building a cabin in the woods to preserving health and preventing disease. The success of such publications as *Mother Earth News* and the *Whole Earth Catalog* clearly shows the success of this "movement," which is rooted in what were once considered old-fashioned notions of self-reliance and local autonomy. It tends to be oriented toward local, small-scale, land-based enterprises and harkens back to times when people lived a long time in one place, knew their neighbors and cared what happened to them, and were able to do for themselves a wide variety of tasks now normally consigned to others.

Environmentalists have reason to be interested in such books and in the social movement they serve, because these books typically encourage the conservation of energy and other resources and the wise use of land. One of the groups whose work is directed in part toward helping people simplify their lives is the Center for Science in the Public Interest (CSPI), whose reports have focused on nutrition, energy and the effects of various patterns of consumption.

CSPI's book, *99 Ways to a Simple Lifestyle* (Doubleday, 1977, \$3.50 soft), is a very useful guide for anyone who wants to take a fresh look at living lightly and reducing one's environmental impact. It ranges over considerable terrain to promote "a new way of life, or lifestyle, compatible with nature and supportive of peoples around the world." It explores home cooling and heating and other ways individuals can conserve energy. It examines our practices regarding food, gardening, solid waste, clothing, personal fulfillment, health, transportation and community, and sug-

*Laughingbird* coordinated for Project Jonah an international children's campaign to save the whale. She is associated with the Berkeley Holistic Health Center.



## Vital Connections

Laughingbird

gests ways of transforming old habits into new, more ecologically sound and personally satisfying patterns. What emerges from this exposition of change is that there are really many ways for us to take responsibility for our lives and to create the type of environment we wish—buildings designed and situated to utilize the sun's energy; insulation to conserve heat; turning off lights when rooms are not in use, and so on.

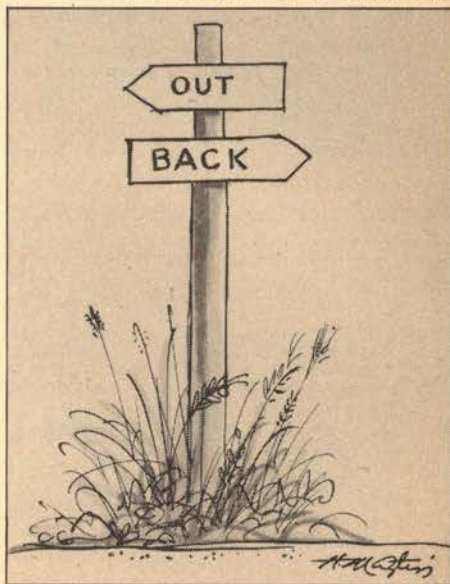
The implications in this book are enormous, not only in terms of environmental benefits, but also in terms of our own personal fulfillment, our "vital connections." From baking bread to car-pooling, the "99 ways" CSPI suggests for simpler living provide an almanac and map for positive change that is holistic in approach, long-range in effect, often easy and inexpensive to implement, and capable of immediate and profound effects on our everyday lives.

It increasingly appears that so-called "simple living" may not be merely an aesthetic preference, but may be necessary—at least to some degree—in order to assure good health and long life. Evidence continues to accumulate that diseases such as cancer, heart ailments, ulcers and even certain types of mental disease are linked with the food we eat, the air we breathe, the water we drink, and the styles of life we choose. These matters are extremely complex, of course, and are fiercely debated among various experts, but it seems generally clear that individuals are capable to a not inconsiderable degree of success in preventing disease in themselves. More and more people are wondering how to protect themselves and their families from pollution- and stress-related diseases. A number of books have appeared to answer this need.

One of the best general guides to under-

standing the various systems of the body and the common ways they malfunction is *The Well Body Book*, by Dr. Mike Samuels and Hal Bennett (Random House, 1975, \$6.95 soft) which provides a solid base for ordinary health care within the family. But what about the extraordinary circumstances we live in—air pollution, food additives, pesticides, PCBs, and the host of other substances that have been introduced into the environment? Are there ways we can protect ourselves from their effects?

One currently popular but extremely controversial measure, espoused by many in the so-called natural-health movement as a way of avoiding or reducing the effects of pollution-related diseases, is megavitamin therapy. There is a good deal of opposition to this therapy: the Food and Drug Administration has been trying to outlaw large-dosage vitamins for several years, and physicians as a group tend to support this attempt. On the other hand, a number of scientists and doctors have claimed remarkable results from treating various diseases with large doses of vitamins. Many of these results are recounted in *Keeping Healthy in a Polluted World* by Harald J. Taub (Penguin, 1975, \$2.95 soft), for twelve years editor of *Prevention* magazine, which he made the largest-selling "natural health" magazine in the world. Taub's thesis is that while large dosages of vitamins once may not have been necessary, the amounts ingested by means of "a well-balanced diet," even with standard vitamin supplements, are no longer adequate to protect us from the effects of environmental poisons in our air, water, and food. He recounts numerous cases of pollution creating disease, and these will be of interest even to those readers who remain skeptical about the efficacy of megavitamin therapy. He discusses various research linking smog with



lung diseases and cancer; consumption of refined sugar with narcolepsy; chlorinated water with heart disease; lead poisoning with hyperkinetic children; iodine deficiency with breast cancer; cadmium with hypertension and arteriosclerosis; and several other chemicals with other diseases. In many cases, Taub's view is unpopular with both government food and health agencies and the medical establishment in this country. Taub defends his

position, however, by noting early in the book that while it had been proven by the late 1800s that cod-liver oil could cure rickets, it was not until the late 1920s that this cure was accepted by the medical profession. "I make this point," Taub says, "simply to indicate that, even if your doctor does not endorse some of the information in this book, that does not necessarily make it wrong."

The studies Taub cites suggest, among

other things, that large doses of Vitamin E can help prevent heart disease by aiding circulation; that Vitamin C can neutralize nitrate poisoning and protect against bladder cancer and cadmium poisoning, a major cause of high blood pressure. Because the subject of this book is controversial, Taub has been careful in his presentation, making clear distinctions between methods that have been studied with enough success to merit his endorsement and those that are still unsubstantiated.

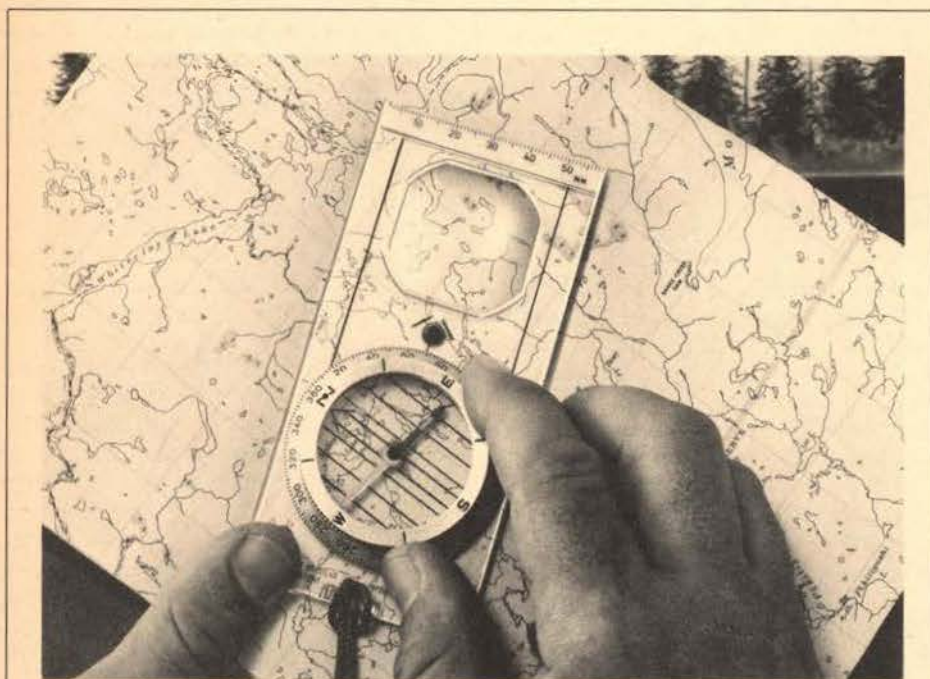
However one feels about megavitamin therapy, this book takes a look at the effects of pollution on health and encourages each reader to examine his or her diet, exercise and general environment, to assess the ways in which life style relates to good health. The book's focus on preventive health care is useful, and it offers considerable evidence that despite the medical profession's resistance to megavitamin therapy, it probably deserves further, more thorough study.

It would seem to be a great leap from preventive medicine to fixing the toaster, the kitchen faucet or the car, but considering the prices charged these days by hospitals and repair persons, maybe not. And beyond mere pecuniary considerations, there is something to be said for cultivating self-reliance in all matters large or small. Two clearly written and well-illustrated books published by Time-Life address themselves to people who know virtually nothing about domestic machinery and would like to learn. *The Time-Life Book of the Family Car* (Time-Life, 1976, \$6.95 soft), through both words and pictures, clearly describes the complicated workings of the automobile and gives instructions on its repair and maintenance. In addition, the book provides a history of cars, offers safe-driving guidelines, suggests good things to know when buying a car, and blueprints an electrical car of the future.

A companion book, *How Things Work in Your Home (And What to Do When They Don't)* (Time-Life, 1975, \$15.95 hard), follows much the same format as the car book. Various sections are devoted to plumbing, wiring, appliances, heating systems, and miscellaneous other machines—lawnmowers, for example.

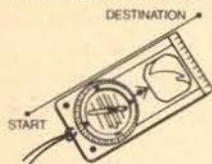
What all five of the books described above have in common is their emphasis on simple, self-reliant living. The changes in outlook and life style they represent are becoming increasingly popular throughout the country. According to a Gallup poll conducted late in 1975, seventy percent of Americans would like to simplify their life styles. Books such as these offer some help along that way.

SCB



## Silva is more than a compass... It's a navigation system you can master in minutes!

Most any compass points North. But Silva combines a compass with a protractor. Result—a simple, yet remarkably accurate navigation system—the Silva System. After a few minutes with the thorough instructions and just a little practice, you can find your way. With confidence! Silva's rugged quality is evident in such features as sapphire needle bearing, liquid-filled capsule, impact resistant materials, built-in magnifier, and luminous points. See Silva compasses—and learn the Silva system—at your sporting goods store or wilderness outfitters.



**1.** Lay the edge of the transparent base along your line of travel, with the direction arrow pointing to your destination.



**2.** Rotate the capsule until North on the compass dial points to magnetic North on the map.



**3.** Pick up the compass and turn your body until the red end of the needle points to North on the compass dial. The "direction of travel" arrow in the base now points precisely to your destination.



**Silva Company**

Division of Johnson Diversified, Inc.  
2466 North State Road 39  
LaPorte, IN 46350

Please send 50¢ if you request catalog.



## Brief Reports: Wildlife

**The Coyote, Defiant Songdog of the West**, by Francois Leydet. 224 pp. San Francisco: Chronicle Books, 1977. \$7.95 cloth.

A thoroughly researched and very readable account of perhaps the most controversial animal in America. Is the coyote a ruthless sheep-killer or wrongly persecuted predator? Leydet offers no simple answers, but he suggests that for our good, as well as that of the animals involved, we should abandon our attempts to "manage" one species in favor of others. He advocates a broader, ecological approach to game and predator management than is now common, while taking unconcealed delight in the coyote's demonstrated ability to thrive under even the most ingenious and persistent persecution.

**Birds of the West**, by Herbert Clarke and Arnold Small. 144 pp. New York: A.S. Barnes, 1976. \$30 cloth.

A large-format survey of the birds of the western United States. The usual taxonomic organization of bird books has been abandoned in favor of a habitat approach, in which species are grouped according to their most typical haunts—desert, forest, marsh and so on. Each species is briefly described; many are illustrated with color photographs. An introductory chapter discusses bird study, the value of birds; and their plumage, anatomy, behavior and related matters.

**Eagles of the World**, by Leslie Brown. 224 pp. New York: Universe Books, 1977. \$12.50 cloth.

A thorough survey of the eagles of the world by one of the foremost authorities on these grand birds. The book discusses virtually everything about eagles—species and distribution, conservation, anatomy and physiology, behavior, breeding—yet it is always very readable, even in the more technical sections.

**The Fresh and Salt Water Fishes of the World**, by Edward C. Migdalski and George S. Fichter. 318 pp. New York: Alfred A. Knopf, 1976. \$25 cloth.

A lavish, large-format survey illustrated with more than 500 color paintings and 180 drawings. Over 1,000 species of fish, repre-

senting all 43 orders and the 212 most commonly known families, are described. An introductory chapter discusses anatomy and physiology, breeding, behavior and related matters.

**Lost Wild Worlds**, by Robert M. McClung. 288 pp. New York: William Morrow, 1976. \$8.95 cloth.

A companion to the author's *Lost Wild America*, this book chronicles the domestication of Europe, Africa, Australia and Asia, focusing on the impact of human societies on the wildlife of each continent. Each chapter consists of an introduction to the region under consideration followed by discussion of its notable extinct, rare and endangered species. The message is clear: everywhere in the Old World, wildlife is retreating before the advance of human society. The book tells a dismal tale, but one that deserves as many readers as possible if wildlife conservation efforts are to succeed.

**Rocky Mountain Wildlife**, by Don Blood, Tom W. Hall and Susan Im Baumgarten. 300 pp. Saanichton, British Columbia: Hancock House, 1976 cloth.

A large, well illustrated book for the general reader on the ecology, behavior, identification and distribution of Rocky Mountain wildlife. The book is much too large for use in the field, but the extraordinary number of photographs of the birds and mammals of the Rockies will be ample compensation for many readers. The book strongly emphasizes ecology and habitat in common with the current trend in regional wildlife surveys.

**Owned by an Eagle**, by Gerald Summers. 223 pp. E.P. Dutton, New York, 1977. \$8.95 cloth.

A charming recollection of Summers' sixteen years of experiences with Random, an orphaned golden eagle. In order to support and care for Random and the various other birds and dogs that lovingly surround him, Summers, a talented English storyteller, became first a rather bemused pet-shop owner and later a grocery shopkeeper. His adventures and misadventures, especially in living and traveling with Random, make for delightful reading.

## FIND FUN & FITNESS IN THE COLORADO ROCKIES

FITNESS WEEK, to get the most out of your wilderness experience. Tennis, swimming, fishing, jogging, basic gymnastics, soccer, half-day hikes & an introduction to the sport of orienteering. Session: July 17-23. **WILDERNESS WEEK:** backpacking trek through high country wilderness. Learn basic skills — camping, map reading, cooking & mountain safety. Session: July 24-30.

For detailed information

### SCANDINAVIAN LODGE

Mt. Werner Training Center, P.O. Box 5040, Steamboat Village, Colo. 80499  
(303) 879-0517



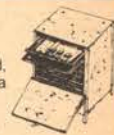
## DEHYDRATED WATERMELON?

Now you can dehydrate your own trail food, fruits, vegetables, meats and fish with a DryKit Food Dehydrator Kit.

Send \$59.00 plus \$3.00 for postage to ...

TITCOMB BASIN PRODUCTS, INC.  
P.O. Box 291-SB, Wilmette, IL 60091

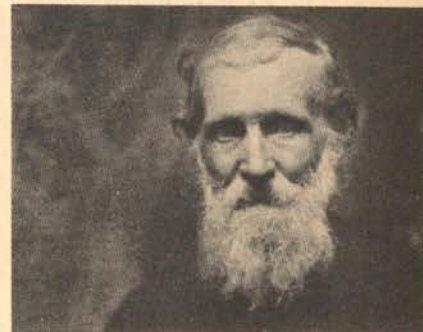
Or send for our free brochure!—Dealer Inquiries invited.



## 'Father-Son Venture' 'Cape Scott Hike'

& base camps & trips in remote coastal areas  
Western Outdoor Adventures  
16115-32 Ave., White Rock  
British Columbia V4B 4Z5 (604) 531-3969

## John Muir: conservationist



Announcing the publication of **John Muir: A Reading Bibliography**, by William F. and Maymie B. Kimes, the work of over twenty years of collecting and research. Every entry is heavily annotated. There are many illustrations and facsimiles. Foreword by Lawrence Clark Powell. **Write for a Descriptive Prospectus.**

**William P. Wreden**

Books and Manuscripts, P.O. Box 56  
Palo Alto, California 94302



## Salmon River, Idaho

Low water this summer will restrict motorboats but will not be a problem for rowboats.

We have trips of 5, 6, 14, and 16 days, including charters, in June, July, and August. Write for our brochure.

Martin Litton's

### GRAND CANYON DORIES

P.O. Box 3029, Stanford, California 94305



The ultimate, all-purpose re-usable product: a scarf, sweat band, sling, towel, carryall, handkerchief . . . all neatly folded into one 100% cotton bandanna.

### sierra club bandanna

SIERRA CLUB BANDANNA, P.O. BOX 474, OLYMPIA, WASHINGTON 98507

send me:

forest green bandannas (\$3 each, postpaid)

cedar brown bandannas (\$3 each, postpaid)

more information on bulk rates for Sierra Club chapters and groups.

(Washington residents add state sales tax.)

This 21" x 21" washfast bandanna is screen printed on 100% cotton.

name: \_\_\_\_\_

address: \_\_\_\_\_

city: \_\_\_\_\_

state: \_\_\_\_\_ zip: \_\_\_\_\_

ALL PROCEEDS GO TO WASHINGTON COUNCIL, SIERRA CLUB.

# News

## OCS leasing program is slowed

A federal judge voided a lease sale for oil and gas drilling rights in the Atlantic Ocean, and Secretary of Interior Cecil Andrus cancelled a similar sale scheduled for the Lower Cook Inlet in Alaska, two major decisions that could set an important precedent in the currently accelerated Outer Continental Shelf (OCS) leasing program. The U.S. district court judge, Jack B. Weinstein, charged that then-Secretary of Interior Thomas Kleppe had repeatedly violated the National Environmental Policy Act (NEPA) in allowing the sale of drilling rights last August. In his decision, which criticized the vagueness of the impact statement for the sale, Judge Weinstein said that Kleppe greatly overstated peak oil and gas production of the tracts, underestimated the cost of production and failed to consider the environmental impact of specific probable pipeline routes from the leases to the shore. Secretary Andrus, in cancelling the Lower Cook Inlet sale, said he wanted to examine the environmental impact statement as well as all available options.

## Priority wilderness legislation introduced

Two significant wilderness bills have been introduced in the House. One is H.R. 3454, the Endangered American Wilderness Act, sponsored by Representative Morris Udall, chairman of the House Interior Committee. Revised since last year, this bill includes twenty-one national forest *de facto* wilderness areas in ten western states. A total of 1,382,940 acres are proposed for wilderness designation, and an additional 604,930 acres are proposed for wilderness study-area status. Rep. Udall also introduced H.R. 1907, a bill to designate as wilderness thirty-nine areas in the national wildlife refuges and fifteen national forest primitive areas not yet acted on by Congress. Where there are differences from an agency proposal, the boundaries are those suggested by citizens.

## Electrical energy scenario proposed for Pacific Northwest

A scenario for the future of electric energy in the Pacific Northwest has been released by a coalition of environmental groups, including the Sierra Club. The study outlines a practical and cost-effective program through which electricity consumers in the region can avoid many costly and environmentally damaging new thermal power plants. It concludes that investment in insulation and other energy-efficient steps would preclude the need for any of the plants now proposed by the Bonneville Power Administration. The report proposes an innovative conservation program consisting of investment in a wide variety of energy-efficient improvements in the residential, commercial, and industrial sectors, together with changes in the mix of Northwest industry favoring labor-intensive enterprises.

## Arctic Gas pipeline route endorsed by FPC judge

Administrative Judge Mahun Litt of the Federal Power Commission has filed an initial decision indicating his choice of a pipeline route to bring gas from Alaska's North Slope to markets in the U.S. As expected, he endorsed the Arctic Gas consortium's damaging and controversial Mackenzie Valley route through Canada, which also would cross the Arctic Wildlife Refuge in northeastern Alaska (See *Sierra Club Bulletin*, March 1977.) He virtually dismissed the two other competing routes, one following the Alaska highway, the other paralleling the Trans-Alaska pipeline, with tankers transporting the gas south to California. "This is just the beginning of a long process, not the end," said Brock Evans, director of the Club's Washington, D.C., office. Under the terms of the law passed last summer, the full Federal Power Commission must make its final decision by May 1st. Then, the Council on Environmental Quality will conduct hearings and make recommendations to the President—who in turn must make his final recommendation by September 1st. Congress then has sixty days to approve or disapprove the President's recommendation.

## Olympic ski lifts approved

Since the February *Bulletin* article on the 1980 Winter Olympic games scheduled for Lake Placid in New York's Adirondack Park, two significant developments have occurred, neither of them pleasing to environmentalists. First, the Adirondack Park Agency has given its "conceptual approval" to the proposed ski jumps, which would intrude visually into adjacent wild areas. Second, a final environmental impact statement has been released, and it still glosses over or ignores some major problems, including the ski jumps, highway construction, the need for an overall transportation plan for the Olympics, and the impact of the games on the park's wilderness areas.

## Club holds energy conservation workshop

Participants from twelve states contributed ideas for incorporation into state energy conservation plans at a workshop sponsored by the Energy Conservation Subcommittee of the National Energy Policy Committee, the Appalachian Regional Conservation Committee, the Joseph LeConte Chapter and the Research Triangle Group. The meeting was held at Quail Roost, North Carolina. Topics included implementation of the Energy Policy and Conservation Act; measures to reduce energy consumption for heating and air conditioning; regulatory and legal impediments to full utilization of carpools; conservation of energy in public and commercial buildings; home insulation standards and building codes; utility rate structures; and co-generation by public and private energy producers.

# News

## Club urges Class-I air designations

The Club has submitted to the Carter administration a proposal to protect air quality in the nation's wilderness areas and national parks, recommending that these areas be changed from Class II to Class I under provisions of the 1970 Clean Air Act. This was first suggested two years ago by Former Park Service Director Gary Everhart, but was blocked by then-Interior Secretary Thomas Kleppe. If agreed to by the new Interior Secretary Cecil Andrus and Agriculture Secretary Robert Bergland, and approved by the Environmental Protection Agency, this reclassification would bar any development adjacent to protected areas that would cause significant deterioration of air within their boundaries. Smog and soot already cloud the classic vistas of Yosemite and Sequoia National Parks, and further plans for construction have also threatened the air purity of the Grand Canyon, Zion and Glacier National Parks. The Club urges all members to write to Interior Secretary Cecil Andrus (Washington, D.C. 20240) and Agriculture Secretary Robert Bergland (D.C. 20250) in support of Class I air for all national parks and wilderness areas.

## Club proposes a Mojave National Park

About 1.2 million acres in the eastern Mojave Desert between Interstate Highways 40 and 15 have been proposed for inclusion in the National Park System by a task force of the Sierra Club's Southern California Regional Conservation Committee. California's state park system plan had said in 1968 that much of this area was worthy of national-park status. The Mojave National Park Coalition is attempting to see that the area is preserved before it is too late. Most of the lands are under jurisdiction of the federal Bureau of Land Management, which has up to now been unable to protect it from damage to plants, wildlife and landforms by off-road vehicles. The Mojave National Park proposal has been endorsed by the Desert Protective Council, the California Wilderness Coalition, the Sierra Club and the High Desert Environmental Defense Fund. For further information write: Mojave National Park Task Force, P.O. Box 1367, Barstow, CA 92311.

## Action initiated to expand the Redwood National Park

Legislation to expand Redwood National Park from 58,000 to 132,000 acres has been introduced by Representative Phillip Burton (D-California). The new bill adds to the park the remaining virgin redwoods in the drainage of Redwood and Skunk Cabbage Creeks and establishes an upstream park-protection zone, where the land may be managed in order to protect the park, water and trees downstream. In his introductory remarks, Burton said, "If the Congress decides it wants a viable Redwood National Park for the enjoyment of present and future generations of Americans, it must act quickly. If we fail to act, we will have wasted much of the funds we have already spent. If these trees go down, they can never be replaced. Let us move now to do the job right and to keep faith with those whose vision began this historic park." Meanwhile, at hearings before the Subcommittee on Conservation, Energy & Natural Resources, Chairman Leo J. Ryan (D-California) announced that he would be calling on the President and members of Congress to exert their influence on the three timber companies operating in areas adjacent to the park to agree to a moratorium on all harvesting until Congress is able to complete action on the enlargement proposal.

## Clean-water battle begins

Efforts have begun in Congress to cripple the comprehensive Clean Water Act (PL 92-500). Hearings were held recently on H.R. 3199 and various other bills introduced in both houses, all of which would threaten the vital wetland-protection provision (Section 404) and other essential pollution-control programs. The Sierra Club and many major national organizations are working actively to defend the act, as well as to promote strengthening amendments (see *Sierra Club Bulletin*, Feb. 1977.) Readers are encouraged to urge their senators and representatives to support a strong Clean Water Act and specifically to oppose any amendments that would weaken the Section 404 wetlands-permit program or that would turn the construction-grants program (Section 201) over to the states, thus bypassing federal NEPA review, public participation or the possibility of citizen suits. For periodic legislative updates on the Clean Water Act, readers should write to: Clean Water Task Force, Sierra Club, 530 Bush St., San Francisco, CA 94108.

## Two controversial highways approved

Transportation Secretary Brock Adams has approved two highways opposed by environmentalists—Interstate 66 in the Washington, D.C. area and the Westway Highway along lower Manhattan's Hudson River shoreline. Environmentalists oppose Interstate 66 because it would compete with the proposed Metro Rail mass-transit project and because of its potentially adverse impact on air quality, open space and local communities. Adams' approval of the Westway project is even more disturbing to environmentalists because he did so before the Environmental Protection Agency (EPA) and the Council on Environmental Quality had completed their reviews. EPA just recently called the 4.2-mile, \$1.6-billion highway "environmentally unsatisfactory," supporting what environmentalists have long contended—that spending so much on a highway is ridiculous while the local, capital-starved mass-transit system continues to lose riders and money.

## The Incredibly Compact TAD-POLE

Carry it anywhere! In your trunk, on your bike, in your pack. The totable Tad-Pole expands from 16 inches to 6 feet and weighs only 4 ounces. Tubular fiberglass rod, anodized aluminum guides and sure grasp cork grip. Plastic case included.

**\$995**

(Va. residents add 4% sales tax.)

Dealer inquiries invited.

**TAD-POLE**

Send \$9.95 check or money order to:

**EASTERN ENTERPRISES, INC.**  
2931 GALLOWS ROAD  
P.O. BOX 325  
MERRIFIELD, VA. 22116

## EMS Chamois Shirt \$9.95



This comfortable shirt of lightweight 100% cotton Chamois Cloth is just the thing for indoor and outdoor wear. It has generous shirt tails, two pockets with button-down flaps, and lock stitch sewing throughout. Shrinkage is minimal if laundered according to the label.

The fine workmanship and styling make this shirt an excellent value at \$9.95. Colors: tan, navy, red, green. Men's sizes: S, M, L, XL. Women's sizes: 8, 10, 12, 14, 16. Free Catalog Available

## EMS Specialists in Lightweight Camping and Mountaineering Equipment

- Send me a free copy of your complete color catalog of outdoor equipment, clothing and accessories.
- Enclosed is my check or money order for \$9.95. Rush my Chamois Shirt and free catalog.

**Satisfaction Guaranteed**

Size: \_\_\_\_\_ Color: \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

## Eastern Mountain Sports Inc.

Box 959 • 1047 Comm. Ave., Boston, MA 02215  
Retail Stores located in Boston, Denver, St. Paul, Hartford, Buffalo, Ardsley and Long Island, NY.

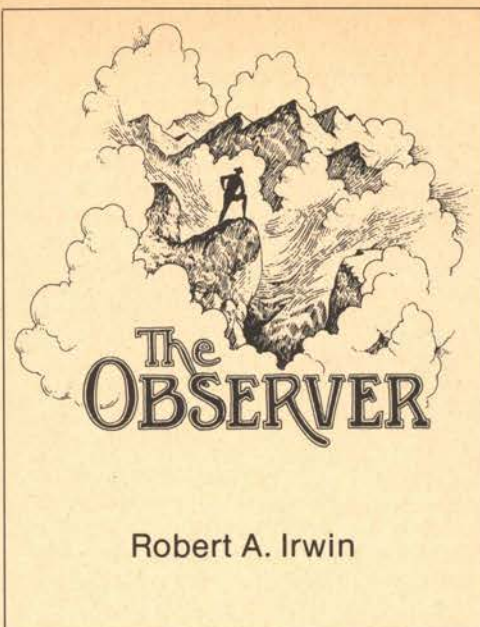
## A Person-to-Person Way to Revitalize a Group

A recent letter to the editor of a newsletter published by a regional group of one of the Sierra Club's large, long-established metropolitan chapters expresses an all-too-frequent complaint of new members. The writer, who signs himself or herself "Anon," states that in two years of attending monthly meetings "not one person has come up and talked with me." On occasion, Anon has spoken to two or three of the group's leaders, who "are polite for a few moments, then hasten to join other old-timers." Anon volunteered to help on the newsletter, leaving name and phone number, but never heard from anyone. Whatever the merits in this case, it does typify some of the obstacles that seem to be strewn in the paths of members, especially new ones, who want to do more than just pay their dues.

The source of the difficulty in enlisting members in group or chapter activities doubtless is more lethargy and old habit on the part of the leaders than any studied exclusionary policy. As a chapter or group matures, successive job transfers, sickness and aging all tend to thin out the leadership. Only a few activists then are left. They must carry the whole load, with little time to think of recruiting or training new leaders. At that point a potentially strong chapter or group can become moribund.

Moribund is exactly the way Marie Reeder described the condition of the Columbia Group of the Pacific Northwest Chapter only a couple of years ago when she headed its membership committee. In her 1,000-member group, she said, there were only about a half-dozen really active people. The turnout at general meetings rarely exceeded twenty. Its nine-member executive board had difficulty getting a quorum to its meetings; visitors were rare. Clearly the Columbia Group needed revitalization. Its then chairman, Walt Mintkeski, and others, including Reeder, knew there had to be many among the group's large membership in the greater Portland (Oregon) area who would be eager to participate. But how to tap this source of talent and energy and put it to work?

Their first step was to find out just who the members were—their interests, skills, what issues were most important to them, and what they were willing and able to do. The Columbia Group conducted a random survey by telephone. Taking every eighth name on the membership list, those hundred or so names were then broken down into smaller lists, each assigned to a separate caller. Up to four calls were placed to each name, and these at varying times of day and night. Only those on the random list were called.



Robert A. Irwin

The telephone interviews unearthed hitherto inactive members who were eager to participate in the group. They told the callers that for the first time they felt they really belonged to the group and were needed. Some surprising facts also were turned up in the survey. The group's membership was younger than expected—more than half between the ages of twenty and forty. Also, it was less transient than had been thought: seventy-one percent had lived in Portland more than six years, and about half more than fifteen years. Profiles of member interests on conservation issues (twenty-nine percent had ranked wilderness preservation first) and on activities (sixty percent wanted outings) are helping to guide the group in its planning of programs and activities.

The telephone survey has contributed heavily to turning the Columbia Group around. The six lonely activists of two years ago have multiplied into six action committees, each with a dozen or more active members who meet at least once a month. The monthly general meetings draw crowds of 150 and more. The executive board is looking for a larger meeting place to accommodate the score or more interested members who now attend regularly. The group publishes a monthly newsletter that runs to twenty pages. It has succeeded in putting itself on a sound economic footing, particularly through its two tremendously successful annual environmental auctions, which netted a total of \$5,000 (see the September, 1976, *Bulletin*, page 29). Most important, however, the Columbia Group has become a vital force for the environment in Portland and in the rest of Oregon as well. It has won wide community support and respect, for itself and the Sierra Club—all of this because a few people had faith in the members and

then took the time to talk with them personally.

The telephone survey still lives—in the form of an active telephone chain system for quickly contacting members for conservation alerts and other needs. Its original purpose is still served, for callers regularly contact all new members, making them feel welcome and encouraging their participation in the group's activities.

## Club Expands Film Rentals

An often overlooked but important adjunct to the Sierra Club's extensive publications program is its library of films on major environmental and conservation topics. Most members at one time or another have viewed some of the film library's classics such as *The Grand Canyon*, *The Redwoods*, and *Glen Canyon*. These and other Sierra Club films have been effective tools in winning some important conservation goals. Few members, however, seem to be aware that these and the other thirteen Sierra Club films are available on a rental basis for showings by chapters, groups and outside organizations as well. All sixteen of the films are 16mm, in color, and run about twenty minutes on the average. In addition to the three mentioned above, the films are:

*Alaska, Land in the Balance*—the Club's newest release, an eloquent statement of the choices ahead for the "Great Land";

*Off-Road Controversy*—an objective study of ORVs and the clash of rights;

*Oil! Spoil! Patterns in Pollution*—an almost nonverbal discussion stimulator;

*West Chichagof!*—deals with the threats to Alaska's Tongass National Forest;

*No Room for Wilderness*—an African-based, population-ecology teaching film;

*An Island in Time*—explores the Point Reyes National Seashore;

*Follow the Wind to Cousin*—a visit to the unique Cousin Island bird sanctuary in the Indian Ocean;

*Miner's Ridge*—a stunningly beautiful film on an area in the North Cascades threatened by mining;

*Nipomo, the Living Dunes*—a sea-and-wind-sculpted stretch of Pacific Coast coveted by developers and industry;

*Nature Next Door*—a child's view of the natural world;

*Two Yosemite*—a story of the "Lost Yosemite," the Hetch Hetchy Reservoir;

*Wasted Woods*—an educated look at forest practices and their impacts, especially on soils;

*Wilderness Alps of Stehekin*—a film classic, instrumental in the creation of North Cascades National Park.

For complete details on these Sierra Club films and how to order them, write for the "Film Packet," available from Information Services at Club headquarters. Another new film has been released, but it is for rental use only in California. Its title is *The Wild and Fragile Isles of the Santa Barbara Channel*.

Now, supplementing its own productions, the Club has just established a lending library of fourteen other outstanding conservation and environmental films. Available only to Sierra Club groups and chapters for their own use, the films are:

*Bulldozed America*—A CBS special on environmental pollution narrated by Charles Kerault;

*The Coming of the Roads*—Produced by KABC in Los Angeles, it is an eloquent plea for sparing the Santa Monica Mountains and against "terracing";

*The Day Love Died*—an artful juxtaposition of a ruined Mayan temple and the shambles of a U.S. city, suggesting both civilizations have sacrificed human life;

*The Endangered Shore*—A Delaware Wild Lands documentary on developmental impact on coastal and estuarine lands;

*Everglades*—a short based on photographs from the Exhibit Format Book;

*Mineral King*—an exposition of the potential for environmental disaster if the proposed Walt Disney ski resort should be developed in Sequoia National Forest;

*Myths and Parallels*—a somber look at the prospect that mankind may be heading toward the fate of the dinosaur unless it sheds its incubus of useless myths;

*Nyala*—the lure and fascination of mountaineering captured on film in one man's ascent and descent of a lofty peak;

*On the Threshold—Refuges—Alaska*—the U.S. Fish and Wildlife Service's proposals for parks, refuges and scenic rivers in Alaska, a well-prepared documentary;

*The Pond and the City*—a Conservation Foundation film by Willard Van Dyke on urban conservation, stitched together with quotes from Thoreau;

*Population and the American Future*—a two-part, hour-long, and wide-ranging exposition of the problems of growth;

*Reflections in Oil*—an award-win-

ning report on the Santa Barbara oil spill, a good starter for meetings on coastal pollution;

*Warning, Warning*—Harvey Richards' hard-hitting documentary on a gamut of environmental threats to San Francisco Bay;

*Wild Rivers*—an oldie produced by Humble Oil (now Exxon) that, despite its origin, stresses the importance of free-flowing rivers from a largely environmentalist viewpoint.

All of the above fourteen films may be ordered from Association Films, Inc., 6644 Sierra Lane, Dublin, CA 94566, on a first-come, first-served basis. Regular Sierra Club films-rental fees apply: \$7.50 per day, \$11.25 for two days, or \$15 for one week, plus the return postage. Only *Mineral King*—because of its current, urgent importance—is available from the nine other locations of Association Films (their addresses are listed in the packet of information on Sierra Club Films). Again, requests from members for any of these fourteen films for non-Club use cannot be honored because of the very limited number of prints available. However, some of these titles can be obtained from other sources.

#### Notes and Briefs

Most messages that come to this column from the field are pleas for help in trying to halt some environmental outrage. Getting a message that starts out with "Great news!" is a most heartening switch. The good tidings come from the Sierra Club of Canada. That chapter's 1975 proposal for a wild-river park along the Missinaibi has been approved by Ontario's Natural Resources Ministry. The entire 265-mile length of the river, from its headwaters north of Sault Sainte Marie to the Moose River sixty miles from Hudson Bay, has been declared a Park Reserve—almost a park during planning, according to chapter chairman Ric Symmes. In setting aside that scenic river route of the fur traders, the Ontario government gave recognition to the Sierra Club for its support, both in hours of effort and in money. Virtually the last complete stretch of an unspoiled wild river within easy reach of urban centers in Ontario and northern United States has been saved for future generations.

\* \* \*

Because of the increased lead time between the deadline for this column and the time of delivery of the *Bulletin*—almost two months—more timely material is needed than is available from newsletters. (But by all means keep the newsletters coming. They are extremely helpful. Some arrive only now and then, however, and others—

Los Padres, Santa Lucia, and Hoosier—still never get here.) If any member, group or chapter has any time-value notice or piece of information that should appear in the Observer column, please mail them to me at my home address: Bob Irwin, 4173 Montecito Ave., Santa Rosa, CA 95404.

\* \* \*

The response to the report in the February Observer column on the book sales program of the Peninsula Group of the Loma Prieta Chapter was so heavy that the group's supply of *The Wilderness World of John Muir* was soon exhausted. Orders are still coming in at a fifty-a-week clip. In its reordering, however, the group found that the publisher now has hiked the price by \$1.00. Therefore, effective April 1, the group reluctantly must charge \$6.00 per copy, postpaid (plus, for California delivery only, 35c sales tax). But still, the book is worth it. Orders should go to the Sierra Club Peninsula Group, P.O. Box 111, San Carlos, CA 94070.

\* \* \*

As a result of the unclear ballot wording on the amendment to Article IV of the Club bylaws, regarding voting by *ex officio* Board members, Club Secretary Richard Cellarius has declared the ballot on this issue to be invalid. The issue will be resubmitted to the members in a future election.

#### Erratum

There was a mixup in the galley proofs for the March issue of the *Bulletin*. Thus the end of Greg Thomas' article, "Nuclear Exports: The Perilous Enterprise," appears not on page 19, as intended, but on pages 25-26, appended to the article by Doug Scott, "Northwest: A Perfect Opportunity for Energy Conservation."

Scott's article ends with the fifth paragraph, third column, page 25. The following paragraphs, beginning "Opportunities for the Sierra Club..." and continuing through page 26, constitute the concluding section of Thomas' article on nuclear exports.

We apologize to our readers and to both authors for this error.

## Southern Oregon Coast

Elegant view house. 4 bedrooms, 3½ baths, 4 fireplaces. Numerous carefully considered details. Older guesthouse, caretaker's mobile home. Buyer must grant conservation easement. Surrounding old forest, bluffs, intertidal coast to be nature preserve. Acreage, ocean frontage negotiable. (503) 482-4175.

## Environmental Quality— Whither?

May 7, 1977 will bring this year's annual meeting of the Sierra Club Board of Directors, and with it, the annual dinner. Featured in the program following this event will be an address by Charles Warren, chairman of the Council on Environmental Quality and former California State Assemblyman, who sponsored pioneering legislation regarding energy conservation, nuclear safety and preservation of prime agricultural land which have become models for national and international action.

A buffet dinner, to be held at the

Sheraton-Palace Hotel in San Francisco, has been planned to provide a wider range of choice and quantity. A cash bar will be available at 6:30 p.m. with buffet service starting at 7:00 p.m.

Tickets, at \$11.00 per person, may be ordered by sending your letter of request, check and self-addressed, stamped envelope to: Sierra Club Annual Dinner, 530 Bush Street, San Francisco, CA 94108. Mail orders will be filled between April 1 and April 25. Tickets will be held at the door for paid requests received after that date. Tables for ten people may be reserved on a first-come, first-served basis. The table *must* be completely paid for at the time of reservation.

## Dunham classic climbers

Whether you're into hiking, backpacking or true mountaineering, you should be in Continental Tyroleans®. Classic European craftsmanship, high quality construction and all-day comfort. Treat your feet to the finest in rugged outdoor footwear . . . Continental Tyroleans® from Dunham. Send for brochure and the name of your nearest Dunham dealer. The Dunham Company, Dept.S47P.O. Box 813, Brattleboro, VT 05301.



Great footwear for the great outdoors

The Dunham Company Brattleboro, Vermont • New York • Denver

## Idaho Wilderness Trips

Bill and Mary Ann Johnson offer the following backpack and drop-camp trips into our wildest and most beautiful primitive areas:

Hells Canyon Backpack—

5 nights plus 100 miles of whitewater boat trips. May 23-28, June 13-18, Sept. 12-17. (\$200.00)

Drop-Camp trips into most remote area of Salmon River Breaks plus whitewater boat trip. 10 days. July 11-20, Aug. 1-10, Aug. 22-31. (\$300.00)

Will offer a discount to persons with ability to sketch some trail details in either area.

Everything furnished. Best Bay Area and nationwide references. For details write or call the Johnsons at P.O. Box 143, Lewiston, Idaho 83501. (208) 743-6495.

Again available: OLD FASHIONED, NATURALLY RAISED ON OWN MOTHER'S MILK BABY BEEF & VEAL

No hormones, antibiotics, pesticides, herbicides used, ever. Deliciously tender with less fat. 100% pure organic.

SPECIAL 28 LB. TASTER-SAMPLER PACKAGE WITH YOUR FAVORITE CUTS: STEAKS, ROASTS, SCALLOPINI, CUTLETS. 4 OZ. PATTIES. Phone (804) 985-7746 or write

**TEEL MOUNTAIN FARM**

BOX 11 STANARDSVILLE, VIRGINIA 22973

HOME DELIVERIES START SOON. RESERVE NOW. SUPPLY LIMITED.

**THIS IS A SMALL AD for a small place . . .** the most isolated, and highest, privately owned guest ranch in the Wyoming Rockies • completely surrounded by National Forest • 50 miles from the nearest town • no telephone • fine horses • endless trails • numerous wily trout • limited to 14 guests, write early to: Darwin Ranch, Jackson, Wyoming 83001.

## Ascente makes the best for the Outdoors



### Hollofil™ II

DuPont DACRON® Hollofil™ II is outstanding among man made fibers for use in sleeping bags and insulated clothing. It gives Ascente these benefits:

- protective warmth • fast drying
  - easily compacted • non-allergenic
- See your Ascente dealer. Or send \$2.00 for catalogue and redeemable merchandise certificate.



**Pacific / Ascente**

P.O. Box 2028  
Fresno, Ca. 93718

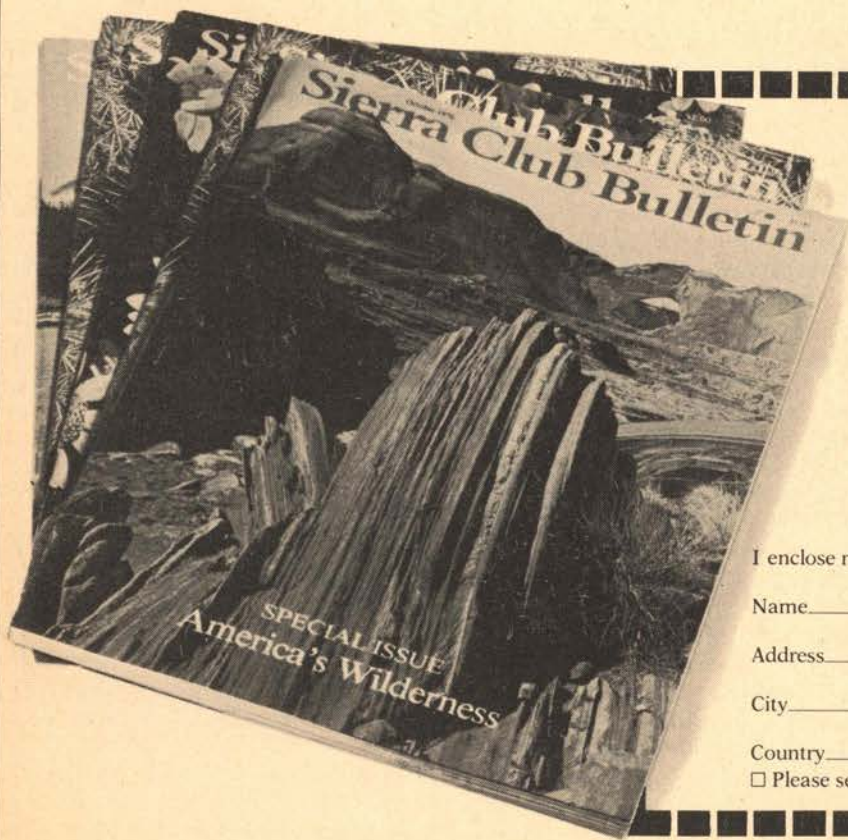
® DuPont Registered Trademark

Here's one  
magazine  
that always  
gets down to  
basics.

Basics like the air we breathe, the water we drink, the complex, fragile network of relationships that supports life on our planet. THE SIERRA CLUB BULLETIN is the monthly magazine of the Sierra Club, America's oldest conservation organization. The *Bulletin* is devoted not simply to celebrating the wonders of nature but to providing its readers with the kind of fact-filled reports they need to understand the wilderness and to protect it from unwise use. Natural scientists, political scientists, journalists and concerned citizens are among our contributors; articles cover the full range of national and international environmental issues. Recent issues have included stories like these:

- Jacques-Yves Cousteau on Reasonable Utopias
- Eastern Wilderness: A Small Price for a Large Heritage
- Climate and Survival
- Hope for the Great Whale
- Noel Mostert on Super-tankers and the Law of the Sea

In short, the reading that the SIERRA CLUB BULLETIN provides is basic—in every sense of the word. To be sure you don't miss another informative feature, another exceptional portfolio of evocative full-color photographs, or another timely action alert, order your subscription today.



## Sierra Club Bulletin

P.O. Box 7959, Rincon Annex  
San Francisco, CA 94120

I would like to subscribe  
to the *Bulletin* for \_\_\_\_\_ years.

U.S.A.:  
1 year \$8  
2 years \$16  
3 years \$20

International:  
1 year \$10  
2 years \$20  
3 years \$25

I enclose my check or money order for \$ \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

Country \_\_\_\_\_

Please send me information about the Sierra Club.

## Natural Areas Inventory

### To the Editor:

The National Park Service has contracted with ecologists at the University of California and the University of Montana to inventory possible natural areas in the Sierra Nevada for classification as Registered Natural Landmarks. Dr. Robert Curry, geologist, and Drs. Jack Major, Dean Taylor and David Randall, plant ecologists, are the investigators carrying on this study.

The area being surveyed is defined by the physiographic limits of the Sierra Nevada, and includes the western foothills and eastern escarpment of the range. Areas recommended for classification as federal landmarks will be selected on the basis of their representation of characteristic Sierran ecosystems. Outstanding areas of unique integrity will be reviewed for potential inclusion within present park boundaries as representative ecosystems of the region.

Correspondence regarding the details of site selection and evaluation, and suggestions of localities for consideration in this survey, should be directed to this address:

Dean Wm. Taylor  
Department of Botany  
University of California  
Davis, CA 95616

## Antarctica

### To the Editor:

Here in Antarctica I have had an opportunity to look again at your June 1976 issue, which contains both a commentary by Edmund Schofield entitled "Antarctica up for Grabs" and the text of the speech given by Jacques Cousteau on the occasion of his receipt of the John Muir award "for his outstanding contributions to furthering an understanding and appreciation of marine ecosystems." Antarctica is worth saving. It is a beautiful, awesome place. The congregations of birds and other marine life along the coasts and in the Peninsula area are among the wildlife spectacles of the world. We hope that our own work on the transport of pollutants to Antarctica will help in some way to ensure its preservation.

At what point does a professional scientist, especially one working in a conservation-oriented field, cease to ignore scientific inaccuracies in conservation articles and speeches? Perhaps when the formulation of effective conservation policies is jeopardized. In the above issue this critical point is passed somewhere between Schofield's commentary and Cousteau's speech. In the Schofield article, there are what I would consider serious errors—serious



from a strictly scientific perspective—but these do not unduly detract from the conservation issues discussed. The errors committed by Cousteau, however, are much more serious: they are potentially harmful to the formulation of meaningful conservation policies.

A very few cores of bottom sediments in the Ross Sea area have contained traces of ethane—hardly proof of the presence of gas, let alone oil. Cousteau states, however, that "... investigations have discovered coal, gas, oil . . ." There have been no such investigations and there is no factual basis for this statement. Is it not somewhat irresponsible, considering Cousteau's access to the public and the potential impact on decision-makers, to compound the difficulties in what will be a very controversial area if such discoveries are ever made? Energy resources have become an emotional issue. I do not know why Cousteau made the statement that oil has been discovered here, but I cannot see that it serves any useful purpose.

"The seals were scarce, but seal hunting was about to resume." There never has been commercial sealing down here, although farther north the herds of the southern fur seal and the southern elephant seal were decimated by sealers in the last century. The four species of Antarctic seals, however, have not been hunted. In the event that commercial sealing might commence, an international treaty has been drawn up in an attempt to protect them from experiencing the fate of the whales. The populations of these four species, however, have not yet been, and hopefully never will be, adversely affected by human activities. Cousteau's statement is uninformed.

"Penguins proliferated, fattening from the krill left over since the slaughter of the whales." The numbers of one species of penguin—the "chinstrap"—may have recently increased. Possibly the increase, if it is real, is related to a greater availability of krill. Possibly, but data are far too few to permit even a tentative conclusion. The protection of Antarctic food webs in

the event of large scale krill harvesting by man may well be one of the biggest conservation problems of the next decade. The issue is charged with both emotion and the politics of undernourished populations. We need, least of all, uninformed statements that will mislead the public and create divisions within a scientific-conservationist approach to this problem.

"But dead penguins were found, poisoned by distant pesticides, brought here by oceanic currents." Surface currents do not cross the Antarctic Convergence, and Cousteau probably is not referring to the very deep currents from the Northern Hemisphere. Our own laboratory has perhaps analyzed the majority of penguin eggs so far examined for organochlorine residues: we know of no penguins found dead, and the levels we have found—and that other investigators have found—are many times below potentially lethal concentrations. The statement is dramatic, but in no way is it truthful.

Perhaps Cousteau's public successes have carried him too far away from reality. But the landscapes and the marine life of Antarctica are worth saving from an irresponsible exploitation of as yet undiscovered mineral resources and from an unregulated harvest of krill.

From the perspective of the high Antarctic plateau it would appear that the endorsement of Cousteau's dramatic, emotional approach to these problems by the Sierra Club would seriously damage the Club's conservation efforts in Antarctica.

Robert W. Risebrough  
Amundsen-Scott Station  
The South Pole

### Edmund Schofield responds:

Robert Risebrough is respected in both the scientific and conservation communities as a competent researcher and an ally of those of us who are striving to preserve even a few remnants of wildness on an earth now contaminated from pole to pole.

Nevertheless, so far as I know, there are no serious errors of scientific fact in my "Commentary" article, though I was incorrect in stating that the Antarctic occupies one-tenth of the Earth's surface. It is the polar regions that occupy roughly that area.

The only other places where I might be faulted concern DDT. If Risebrough feels I was incorrect in saying the animals that had measurable amounts of DDT in a study conducted some ten years ago "never leave the area," he should note that I was referring to Adélie penguins, which rarely range beyond the limits of the pack ice, and can therefore be considered true residents of the Antarctic region. Later studies of other birds, which are not residents of the Antarctic (many of the studies done by Rise-



brough or his associates) show that birds that migrate into Antarctica have higher concentrations of pesticides than those species restricted to Antarctica. Nonetheless, it is a fact, and a disturbing one, that birds and other animals that never leave the Antarctic do contain pesticides.

The question of how DDT and its products get to Antarctica has been debated since the first report in 1966 that it had been detected there. While it became increasingly apparent that the atmosphere, not the ocean, was the primary vehicle of transport, it was not until December, 1976, six months after my article was published in the *Sierra Club Bulletin*, that a paper by Dr. Risebrough, published in *Nature*, showed that the atmosphere is indeed the most likely route of entry. I stated in my article that the pesticides entered the Antarctic in oceanic currents, but did not mention the atmosphere—partly for lack of space, and partly because definitive studies had not yet been reported. In scientific literature (which is not unanimous on the matter), oceanic currents are frequently mentioned as the agent of transport.

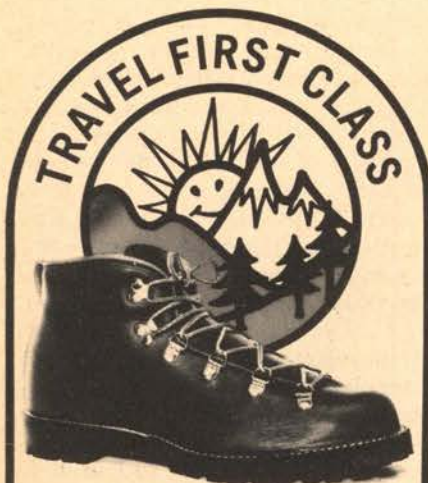
My "Commentary" paper was not intended to be a scientific treatise, yet it was based upon fifteen years of personal acquaintance with Antarctica, a thorough

search of the then-extant scientific publications on Antarctica, several interviews with many experts in government, academia, "think tanks," and so forth, and the reading of innumerable magazine, newspaper, and similar popular articles. In addition, it was reviewed by knowledgeable individuals. The article represented my sincere and still strongly held opinion that there was indeed something afoot *vis-à-vis* United States policy toward Antarctica and the Antarctic Treaty: forces were indeed at work within the government to undermine decades of work to protect Antarctica from unbridled exploitation. Nor do I believe that I was alone in my suspicions, else why were several large and costly meetings held in various parts of the world devoted to the very subject of "regimes" for exploiting Antarctica's wealth? In the wake of the first great energy crisis, anything seemed possible, and apparently just about anything was seriously considered within the government. Too many reputable journalists, and too many hints from too many quarters, were saying the same thing. No, something was afoot. That it may never come about proves nothing, unless it is that we were right to have reacted as we did and when we did. The issues were, at bottom, political, not scientific.

Politics doesn't wait for absolute knowledge, and we couldn't.

I should like to paraphrase Dr. Risebrough's question about where scientists break with conservationists over inaccuracies: "At what point must conservationists—especially those working on the scientific aspects of conservation—cease to honor the strictures and delays of scientific protocol and decide that conclusions must be drawn and corrective action undertaken?" My answer: "When all of the evidence, circumstantial, secondhand and otherwise, is so strong that it would be unreasonable to quibble over shades of meaning, picograms, or strict adherence to scientific ceremony; when, in short, the time has come to act."

Captain Cousteau undoubtedly erred when he attributed the dead penguins he found to pesticides, but in the long run he may well be right. Now is the time to start talking about ways to preserve Antarctica, not after the fact. The Sierra Club didn't get involved in Alaska's preservation a moment too soon, yet look at how much has already been lost there. The fact that Dr. Risebrough's letter was written at the South Pole (!), where he was apparently collecting samples of snow and ice for pesticide analysis, shows just how bad



Your ticket is the

**Danner**  
**Mountain Trail Boot**  
#6490

This boot has been rated superior to 22 other brands by Backpacker 4. It has double-riveted lacing hooks and new, larger D rings with special washers. All rivets are covered with soft, full leather lining. Tongue and ankle are padded. One piece upper, leather insole, and Vibram® Yellow Label Montagna sole and heel. If the trail travel bug has got you, write for free catalog and the name of your nearest dealer.

**Danner Shoe Mfg. Co.** Dept. S  
P.O. Box 22204, Portland, OR 97222

## "BLACK BEAR" by Craft Finders<sup>T.M.</sup>

[*Euarctos Americanus*]

© 1976, by Craft Finders



4 1/4" x 3 1/2"

Encounter this noble symbol of a determined, independent survival. Meticulously conceived in diamond-hard ANTHRACITE COAL, this rugged likeness is hand crafted to a fiery brilliant finish.

Our proud forest monarch will prove a source of pride to all who share a resolute commitment to our natural habitat.

LIMITED AVAILABILITY — RESPOND NOW. **\$15.**

Craft Finders • Box 180 • Grahamsville, New York 12740

Please send to me (or to names indicated on my attached gift list) \_\_\_\_\_ "Black Bear"(s) at \$15. ea.

I enclose \$ \_\_\_\_\_ total (check or M.O.) & \$2 each for shipping and handling.

Name \_\_\_\_\_

Address \_\_\_\_\_ Zip \_\_\_\_\_

things have become. How great it will be when scientists can safely devote their intellects to providing techniques for preserving, not exploiting, the Earth, to providing data and methods on strategies for restoring what has been lost, not just meticulously documenting Earth's demise.

## Geothermal Energy

### To the Editor:

This concerns the article "Geothermal Energy Prospects and Limitations" by Hamilton Hess in the November/December issue of the *Bulletin*. The article presents a good introduction to the nature and potential of the resource, but I feel that the statement of environmental problems lacks perspective. As someone who has been involved with geothermal exploration and environmental impacts of geothermal development for more than two years, I feel qualified to make critical comment.

First, I find that there is no "push for rapid development." Indeed, exploration is financially quite risky and therefore is proceeding quite slowly in comparison with that for fossil fuels. Secondly, Mr. Hess seems to be unaware that the bulk of prospectively valuable geothermal lands in the West are located in desert areas of the Great Basin and the Columbia Plateau-Snake River Plain. He elaborates the modifications to hilly terrain that accompany development at The Geysers, California, although most future geothermal development is likely to occur in flat desert regions with much smaller wildlife and scenic values, not to mention adjacent human population. Mr. Hess speaks of the Black Rock Desert, Nevada, and the Alvord Desert, Oregon, as regions of "exceptional environmental sensitivity." I ask "why, and compared to what?" Why is the Sierra Club opposing development in these and other similar areas? Isn't geothermal development there preferable to a few more nuclear power plants on our coast, or *anywhere* for that matter?

I am wondering when the Sierra Club will begin to establish a set of realistic priorities for environmental protection that recognizes the need for development trade-offs in meeting unavoidable national energy requirements, i.e., for *minimum* projected economic growth rates. Until the Club perceives and deals with economic realities, it will fail to have an effective voice in the planning of major energy development in this country. In short, the Club consistently fails to offer sufficient alternatives to development it seeks to prevent. Zero-growth isn't here yet and, until such time as it does arrive, it would make good sense to *plan* for unavoidable growth in such a way as to minimize en-

vironmental damage. As a Club member of some ten years' standing, I am increasingly disappointed by the policy of indiscriminate opposition to resource development and the lack of some scale of environmental priorities.

Roger W. Greensfelder  
Oakland, California

### Hamilton Hess responds:

Mr. Greensfelder has offered thoughtful and informed comments on my article and on the Sierra Club's energy policies. His comments deserve specific answers.

First, the "push for rapid development" asserted in the article refers primarily to the federal leasing program. Although from the standpoint of the energy industry the program has been inordinately slow in implementation, the Bureau of Land Management offered over one million acres for geothermal exploration in 1975, and the annual figure is constantly growing. The goal of the United States Energy Research and Development Administration (ERDA) is to have up to 15,000 MW of electricity in production from geothermal resources by 1985. If this goal is to be met, under ERDA's own estimate about 37 million acres will have to be designated for exploration and development in the near future. If this takes place the pace of development will indeed be rapid, and conservationist concerns for the protection of a number of sensitive regions will be urgent.

Second, Mr. Greensfelder states that the bulk of prospective valuable geothermal lands are in the desert regions of the Great Basin and the Columbia River Plateau-Snake River Plain in Nevada, Oregon, Idaho and Utah. United States Geological Survey Circular 726, presently the most universally accepted authority on the extent of geothermal resources in the United States, estimates that California has high-temperature geothermal resources (over 150° C) in quantities equivalent to 5,753 MW of electricity for 100 years, and that Nevada, Oregon, Idaho and Utah together have the equivalent of only 1,445 MW. Intermediate-temperature resources (90°-150° C) in the four other states are considerably more plentiful than they are in California, and it is presumably to these that Mr. Greensfelder refers. They do not appear to be particularly promising, however, for the production of electricity from intermediate-temperature resources has not been proven technologically or economically feasible.

Mr. Greensfelder suggests that wildlife and scenic values are relatively low in desert lands. This statement is subject to strong qualification. Some desert regions are of exceptional ecological, geological or cultural value. Mr. Greensfelder asks the reasons for concern over Black Rock

Desert in Nevada and Alvord Desert in Oregon. Black Rock Desert is a rare and nearly untouched example of a northern basin desert. It is also potentially rich in archaeological resources and has historical associations with the Applegate Emigrant Trail, which crosses it. Concern over Black Rock has been frequently expressed by the Wilderness Society, Friends of Nevada Wilderness, the Nevada Outdoor Recreation Association, the Committee for Emigrant Bicentennial National Monument, and the Sierra Club. Alvord Desert supports rare and endangered fish and raptor species and is a scenic resource in close association with the Steens Mountain recreational area. Proposed geothermal development within this region has been a matter of concern to the Sierra Club and the Oregon High Desert Study Group.

With regard to the Sierra Club's energy policy in general, the Club clearly recognizes the need for trade-offs among environmental protection, energy production and a viable economy. The trade-off principle is regularly applied on a case-by-case basis, and the Club does not have a policy of "indiscriminate opposition to resource development," as Mr. Greensfelder suggests. Unfortunately, the energy-production projects the Sierra Club supports or does not oppose go largely unnoticed.

The principle of trade-offs cannot be reduced to a simple formula, nor can it be allowed to be dominated by the single factor of "economic realities." The values of the natural and social environments constantly intermesh, and their short- and long-term resolutions are frequently in conflict. It is wholly consistent with Club policy and goals to choose for integrity of the natural environment and against energy-production projects, when serious environmental degradation would occur. In the larger view of our energy future there are other options that should be urgently followed—energy conservation, and the development of relatively clean, nondepletable alternatives.

Energy conservation could roughly double our current supply without a reduction of our present standard of living. Alternative sources such as solar energy could, if given public, governmental and industrial support, largely replace the more polluting modes of production and reduce the depletion rates of the rapidly diminishing fossil fuels. Recognition of economic realities does not mean we must remain locked into those forms of energy production the energy industry regards as the most financially attractive. Internalization of costs and other economic mechanisms must be employed in the energy market to discourage over-production and over-consumption and to encourage the use of alternative sources.

### MEMBERSHIP CATEGORIES

- Regular \$20.00
- with spouse 30.00
- Supporting 40.00
- with spouse 50.00
- Contributing 100.00
- with spouse 110.00
- Life (per person) 750.00
- Student 10.00
- with spouse 15.00
- Senior (60 or over) 10.00
- with spouse 15.00
- Junior (through 14) 10.00
- Spouse of Life Member 10.00

(Dues include Sierra Club BULLETIN (\$3.00) and chapter publications (\$1.00).)

Enclosed is \$ \_\_\_\_\_. Please enter a membership at the rate checked for:

New Member's Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Zip \_\_\_\_\_

Your Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Zip \_\_\_\_\_

*MAIL TO:*

Sierra Club, Dept. MS, P. O. Box 7959  
Ricon Annex, San Francisco, CA 94120

Please send me a

(Indicate first and second choice)

- Stark Brothers semi-dwarf red delicious type apple tree.
- Stark Brothers dwarf peach tree.
- Stark Brothers dwarf pear tree.
- Thanks, but I have no place for my tree. Just keep it and send \$4.00 per new member to the \_\_\_\_\_ Chapter.

**Sierra Club  
Membership  
Week  
May 15-22**

Trees will be given for "Regular" memberships only.  
Offer ends June 10, 1977

### MEMBERSHIP CATEGORIES

- Regular \$20.00
- with spouse 30.00
- Supporting 40.00
- with spouse 50.00
- Contributing 100.00
- with spouse 110.00
- Life (per person) 750.00
- Student 10.00
- with spouse 15.00
- Senior (60 or over) 10.00
- with spouse 15.00
- Junior (through 14) 10.00
- Spouse of Life Member 10.00

(Dues include Sierra Club BULLETIN (\$3.00) and chapter publications (\$1.00).)

Enclosed is \$ \_\_\_\_\_. Please enter a membership at the rate checked for:

New Member's Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Zip \_\_\_\_\_

Your Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Zip \_\_\_\_\_

*MAIL TO:*

Sierra Club, Dept. MS, P. O. Box 7959  
Ricon Annex, San Francisco, CA 94120

Please send me a

(Indicate first and second choice)

- Stark Brothers semi-dwarf red delicious type apple tree.
- Stark Brothers dwarf peach tree.
- Stark Brothers dwarf pear tree.
- Thanks, but I have no place for my tree. Just keep it and send \$4.00 per new member to the \_\_\_\_\_ Chapter.

**Sierra Club  
Membership  
Week  
May 15-22**

Trees will be given for "Regular" memberships only.  
Offer ends June 10, 1977

# FREE TREE

Send us a new member during Membership Week, and we'll give you your choice of a STARK BROTHERS apple, pear or peach tree absolutely FREE. For details of this special offer, see the Membership Week Ad in this issue of the Bulletin.

**Sierra Club  
Membership Week  
May 15-22**



Lucille Vinyard

*The Siskiyou crest as seen from the trail to Island Lake.*

---

## Bad Medicine for the Siskiyous

---

FRANCIA WELKER

**T**he Siskiyou Mountains, located in extreme northwestern California, contain some of the wild-est lands in that state. A mountain province with a remarkably complex botanical and animal habitat, and extremely sensitive watersheds, the Siskiyous for generations have been honored by Karuk and Yurok peoples. More recently known by a few hikers, sci-

*Francia Welker, formerly with the Sierra Club Legal Defense Fund, worked closely with the Siskiyou Mountains Resource Council to develop this article.*

entists, forest rangers and lumber-company personnel, the relative obscurity of the Siskiyous has made them fair game for wholesale exploitation by the timber industry in consort with an obliging U.S. Forest Service. Current Forest Service plans include extensive clearcutting on very steep, unstable slopes and a road through the heart of the range over which the logs can be trucked to mills along the coast. Clearcutting would virtually destroy entire watersheds: the road would cut in two one of the finest de facto wilderness areas left in the country.

A coalition of scientists, fishermen, local Indian tribes, and conservation

organizations advocates wilderness designation for approximately 240,000 acres in the heart of the Siskiyous. The proposed wilderness would include portions of the Six Rivers, Siskiyou and Klamath national forests and would extend south from the Oregon border for about thirty miles along the Siskiyou crest, whose streams feed the mighty Klamath River on the east and the Smith River on the west. (The Smith and all its tributaries are included in California's Wild and Scenic Rivers System and are under study for inclusion in the federal system.)

Although extremely steep and challenging, the Siskiyous are relatively

low, as California mountains go. They culminate in 7,039-foot Preston Peak, an unmistakable landmark visible for many miles. The peak has the lofty grandeur of a much higher mountain because most of its height occurs suddenly. From its summit you can see the Pacific Ocean fifty miles to the west, Mt. Shasta to the east and the rugged Trinity Alps to the south. There are many routes to Preston's summit: some are just strenuous hikes; others are challenging climbs for even the experienced mountaineer.

Until the late 1960s, not much was known about the Siskiyou except that their extremely steep slopes were prone to landslides and their waters supported a superb salmon and steelhead fishery. The hundreds of miles of streams in the range provide excellent spawning habitat for king salmon, silver salmon, and both winter- and summer-run steelhead trout. Salmon and steelhead catches still are important elements in the state's economy, and in the long run may be more valuable than the timber in this region, yet these valuable fisheries could be destroyed if the Forest Service's plans for clearcutting are allowed to proceed.

#### *Wild and rugged land*

The Siskiyou conifer forests are indeed impressive, not merely as timber, but for their beauty and a floral complexity unrivalled in North America. They contain some twenty species of conifers, and in one small area alone—near the headwaters of Blue Creek in the southern part of the range—botanists have identified more than a dozen rare or endangered species of plants. These mountains also support abundant wildlife, serving as one of the few remaining strongholds for such threatened species as the bald eagle, peregrine falcon, river otter, mountain lion, fisher and wolverine. And, of course, the alleged deep-forest creature known as "Bigfoot" has often been reported ranging through this wild and rugged land.

During the extremely bitter controversy over the formation of nearby Redwood National Park, timber interests complained that the park's establishment would cause them to "lose" millions of board feet of prime timber. So in 1967, under pressure from the Del Norte County board of supervisors, the Forest Service opened up the adjacent Siskiyou to logging for the

**Y**ou can help save the Siskiyou by joining or sending a contribution to the Siskiyou Mountains Resource Council, P.O. Box 4376, Arcata, CA 95521. Memberships are \$5 per year. SMRC can duplicate their slide show and accompanying script for interested groups for \$40 postpaid.

first time, in effect ceding the range to the chainsaw as a consolation prize for the alleged loss of redwood-bearing lands to the west. Previously, the Siskiyou had been classified as "deferred" from logging because their steep, unstable slopes were unsuitable for commercial harvesting. Nevertheless, the Forest Service had estimated there to be perhaps three billion board feet of virgin timber in the high ridges of the range just to the east of the proposed national park. In return for opening the Siskiyou to logging, an area of the Six Rivers National Forest known as the "Redwood Purchase Unit" was to have been taken out of timber production and included in Redwood National Park. But this did not happen. Instead, more than 10,000 acres of the unit went directly into private timber ownership, and the rest became the Yurok Experimental Forest, where most of the "experimenting" consists of clearcutting and tractor logging. The "experimental" timber goes to local mills. Although the unit was never included in the park, the Siskiyou were left open to logging.

Ironically, the biggest trees in the Siskiyou are found in just those places where logging poses the greatest hazards—in the steep inner gorges of



streams and on landslide-prone slopes—because abundant water, which supports ample tree growth, is also a major controlling factor in ninety-five percent of all landslides. Although most of the Siskiyou slopes are naturally subject to periodic slides, an equilibrium exists between the size and frequency of such slides and the capacity of local streams to receive and carry away the resulting additional sediments. They now receive as much as they can carry, enough to keep their channels scoured and their gravel beds sufficiently loose for salmon to spawn. Road-building and logging upset this natural balance by promoting slope failure and thereby increasing the sediment load to streams. A watershed may thus be disrupted from its headwaters all the way downstream. Spawning grounds may become compacted and useless. Stream levels may rise and undermine timber next to the channel. Overall forest productivity may be substantially reduced through loss of soil and vegetative cover.

As the best timber in the Siskiyou is cut over the next couple of decades, loggers will be forced to exploit ever-steepier slopes and poorer sites. Unanswered questions remain concerning timber management on low-quality sites, questions regarding such matters as regeneration, disease, brush competition and, most important, soil loss. Studies conducted in the Pacific Northwest indicate that soil productivity can be reduced eighty percent when only the top inch of soil is lost.

Forest Service studies in the area (made available to the public only as the result of a lawsuit filed by the Sierra Club in 1974) project that mass landsliding, sheet erosion, gullying and rilling caused by proposed logging and road building would increase sediment load by 1500 percent. Recent and current timber practices on lands outside the Siskiyou also provide an indication of what can be expected if Forest Service and timber companies proceed as planned. Slopes exceeding seventy percent have been regularly clearcut. As a result, topsoil has been washed away and hillsides have failed. Once-verdant stream banks have been largely stripped of vegetation and dammed by logs and slash that tear away at their banks with every heavy rain. Roads often fail altogether or result in accelerated erosion both up- and downslope from the roadbeds. Although the qual-

ity of design and construction has improved somewhat in recent years, logging roads must still often cross unstable terrain to get to timber stands.

Since the Forest Service's 1967 decision to open the Siskiyou to logging, intrusion into the region has intensified with roads carved and clearcutting permitted ever deeper into the heart of the range. In 1972, the Sierra Club won a reprieve for these and many other wildlands through the de facto wilderness lawsuit, which challenged the Forest Service's roadless area review process.

#### Roadless review

As a result of that lawsuit, the Forest Service agreed, in the process of land-use planning, to reconsider the wilderness potential of inventoried roadless areas. During its roadless area review, the Forest Service arbitrarily divided the Siskiyou into several planning "units" even though they form a continuous mountain unit. By this "sleight-of-hand use planning," the segments are now in the process of being picked off for intensive road-building and timber extraction.

The Forest Service stubbornly refuses to consider seriously any factual data other than the number of board feet that can be converted from the currently standing forest. Its goal is apparently to remove most of the old-growth trees as fast as possible and to construct a dense network of logging roads throughout the area to facilitate this process, despite overwhelming evidence that the overall result will be a catastrophic and irreversible degradation of the watershed.

The assault on the Siskiyou has been further intensified by the agency's plans to complete the controversial "GO" (Gasquet-Orleans) Road, which would bisect the wildlands in order to provide streamlined timber transport from the Siskiyou to mills in Crescent City. The road has been built from both ends toward the middle, section by section, over a number of years. The Siskiyou crest rises in the middle. The Sierra Club and others have vigorously opposed completion of the GO Road. Matters came to a head on the day after Thanksgiving, 1974, when a couple of local hikers discovered that construction had begun on the next-to-last section of the road. Although (or because?) the Forest Service was well aware of the controversy surrounding



the project, it failed to announce publicly its decision to proceed with construction. The segment, costing more than \$2 million, provided direct access to inventoried roadless country and intruded into traditional sacred lands of the Karuk and Yurok Indians. It also cut through an uninventoried roadless area characterized by extremely unstable terrain. Since no environmental impact statement (EIS) was prepared for the project, as required by the National Environmental Policy Act, the Sierra Club challenged the Forest Service's decision to proceed and was joined in its suit by a host of national, state and local conservation groups, as well as by the Karuk and Yurok peoples. As a result, the Forest Service prepared an EIS, but this document glossed over the project's impacts on both the Indians and the land.

During the legal battle, the Sierra Club Legal Defense Fund acquired a report prepared by Forest Service geology and engineering staff that overwhelmingly supported the Club's contention that the road would cause significant environmental damage, especially massive slope failure and watershed destruction. The EIS failed to disclose these damages. SCLDF discovered that Phillip Schultz, a high-ranking officer in Region V of the Forest Service, was so upset when he read the incriminating report that he ordered *all copies* destroyed. He

later testified under oath that he felt he had an "undefined management prerogative" to destroy any report that was contradictory to policy. So much for impartial Forest Service consideration of facts that don't comport with timber-cut goals.

A federal district court judge allowed the project to go ahead despite the contents of the report and its shocking cover-up by the Forest Service. The judge took the position that despite severe stability problems and the cover-up, the Forest Service was still the "expert" and must know best.

The man responsible for the cover-up is still employed by the Forest Service, and in an ill-disguised effort to prevent professional staff from writing such reports in the future, the agency has transferred several people to areas outside their areas of expertise. Regional Forest Service management has also expressed concern over the fact that the Six Rivers National Forest has received a great number of requests for information under the Freedom of Information Act and appears to believe this is due to "serious leaks of information." Forest Service employees also have been advised to guard against "conflict of interest" with regard to disseminating information to the public!

#### Final plans expected

The most recent land-use plan calls for completion of the last link in the GO Road and would commit many square miles of the fragile wilderness to intensive timber extraction, despite evidence from the Forest Service's own technical staff that at least sixty-one percent of the plan area is subject to severe degeneration, landslide, and other constraints. If the GO Road is completed, it will cut off Blue Creek from the rest of the Siskiyou and desecrate several of the most important Indian cultural sites. The plan is currently being appealed by the Sierra Club, Indian peoples and others. Plans for logging the rest of the Siskiyou are also proceeding rapidly. The Forest Service is advocating intensive logging for most of the area. Final plans are expected in the near future.

Just as the Forest Service has failed to acknowledge the severe impairment of land productivity caused by current logging practices and proposed clearcuts, it has been reluctant to acknowledge the value of the Siskiyou to Karuk



Tim McKay

*Preston Creek, whose headwaters are near Preston Peak, the highest and most rugged peak in the Siskiyou.*

and Yurok peoples and the impact exploitation of these lands would have on their continued cultural viability.

Rocky outcrops occur frequently along the crest of the Siskiyou and on higher peaks in the area. Some of these, such as Doctor Rock and Medicine Mountain, have special significance to people of the Karuk and Yurok tribes. These are river people; their names reflect their relationship to the Klamath. Karuk means upstream;

Yurok, downstream. For perhaps 10,000 years, these people have lived along the Klamath's banks. Food was ample and pleasing: salmon, trout, smelt, eels, mussels and clams, supplemented with nuts and berries. The land continues to provide for the people even though the federal government now regards it as its "property." The center of the Indians' world was the high country of the Siskiyou, where they would go to make medicine, gain

power and pray. They still go there, men and women, young and old, to be trained by Karuk and Yurok doctors.

The ceremonial use of these areas by Indian peoples is essentially private and individualized. They regard it as inherently inconsistent to discuss such practices and uses in a public non-Indian forum. Thus their dilemma in this situation has been particularly acute. To discuss the matter is not good; but not to do so under the circumstances is even worse. Moreover, they are understandably uneasy with their "allies," the conservationists, who for their own reasons have been aligned against other Indian peoples over land use and control on more than one occasion.

However, the actions of the Forest Service require these people to defend openly their use of the area because to survive, a vital culture must adapt itself to the hardships of the time. The Karuks and Yuroks thus have made significant attempts to inform the Forest Service of their existence not only as individuals but as a living culture.

Indian peoples support wilderness designation and wish to add an element to the wilderness proposal for the Siskiyou, one thoroughly consistent with the Wilderness Act; that adds to the richness of its meaning. They seek recognition of the special cultural value of this place to Indian peoples. The very essence of their cultural use of this area is in keeping with wilderness designation, for had their use been allowed to continue as it did for millennia, the wholeness of the Siskiyou would not now be in jeopardy.

Before the non-Indian came, the Karuks and Yuroks would not have called this place a wilderness. "Wild" was an alien concept. It was a good place, a strong place, a place to make medicine and heal. But in this epoch, it must be officially and Congressionally anointed "wild" in order that its healing power may not be wrested from it. This will be no easy matter, for the timber industry covets the living trees and has much power of its own of another kind—and much influence.

To preserve the area, those in sympathy with the Indian peoples and this place must exert their power and influence to persuade Congress and the new administration in Washington to provide protection for and recognition of the unique and endangered Siskiyou.

SCB





*The Kobuk River, one of the largest and longest in Alaska, rises in the proposed Gates of the Arctic National Park in the heart of the Brooks Range. On its long journey west toward Kotzebue Sound, the river flows through the proposed Kobuk Valley National Monument.*

# Alaska's Wild Rivers

JACK HESSION

**A**laska's rivers are as diverse as its landscapes—from the island brooks of the Southeast's coastal rainforests to the glacial whitewater of the Wrangell, St. Elias and Alaska ranges; from the winding clearwater streams of the interior to the ice-hemmed rivers of the Arctic. And most of these are wilderness waterways.

Alaskan rivers serve as year-round transportation routes through a part of the world that is still mostly roadless. Their lowland valleys provide the most productive wildlife habitat in an otherwise austere, unforgiving landscape. These valleys are the homes of thousands of Alaskan villagers who still live off the land. Annual flooding on the rivers maintains the natural fertility of millions of acres of pot-hole lakes, sloughs, and marshes vital to migratory birds, furbearers, moose and their predators. During the ice-free months, float trips down these avenues of scenery

*Jack Hession is the Sierra Club's Alaska representative.*



*Failure to protect Alaska's rivers could well mean the destruction of salmon spawning grounds, and with them, the decline of a rich fishery.*



Jack Hession

*Caribou crossing the Chilikadrotna River, one of the finest float streams in Alaska. A tributary of the Mulchatna River, the Chilikadrotna flows through the proposed Lake Clark National Park.*

and wildlife offer what many Alaskans consider to be the ultimate wilderness experience.

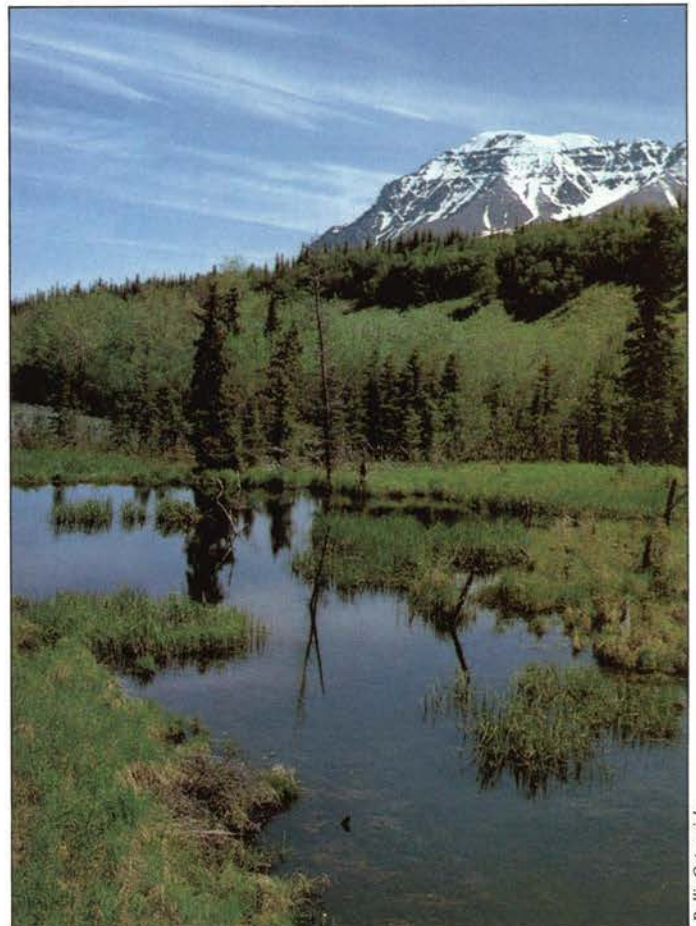
But threats to these rivers abound. In southeast Alaska, administered by the Forest Service, multinational pulp and paper corporations clearcut the river-bottom lands, where the best timber grows. In interior and northern Alaska, the quest for oil and gas will mean pipelines, roads and other development in numerous river valleys.

North Slope rivers are imminently threatened. A proposed natural gas pipeline through the Arctic National Wildlife Range would cut across some of the state's finest waterways. And there is minimal protection for the rivers of the National Petroleum Reserve-Alaska (formerly NPR #4) as it is explored and drilled for oil and gas.

On the Susitna River near Mt. McKinley National Park, the costliest Corps of Engineers dam project in history would wipe out the biggest whitewater in North America. Elsewhere, destructive placer mining for gold continues, virtually unchecked by the state and federal governments.

Now, for the first and probably the last time, the American people—owners of Alaska's public lands—have an opportunity to preserve its outstanding rivers. Representatives Morris Udall and John Seiberling and Senator Lee Metcalf are sponsoring Alaska national-interest land bills that call for the inclusion of 115 million acres of public lands and waters in the national park, wildlife refuge, and wild and scenic rivers systems. Within the parks and refuges, scores of rivers would be protected from headwater to mouth; outside these units, wild river designation would safeguard many other wilderness waterways. The Udall-Metcalf bill is by far the most comprehensive of any that is currently before Congress.

SCB



Rollie Ostermick

*A small beaver pond near Margot Creek in Katmai National Monument, which under H.R. 39 would be expanded and given national-park status.*

**Coleman**

**PEAK 1**

**INNOVATION**



A souped-up, scaled-down backpack stove. Rated approx. 8500 BTUH input . . . 3½ hours at simmer. Fully adjustable flame. Quieter, easier to live with. Extra large fuel capacity. And no priming needed under most conditions.

*Available at Specialty Outfitters Only*

**PEAK 1 • INNOVATIVE LIGHTWEIGHT CAMPING EQUIPMENT**  
The Coleman Company, Inc., Wichita, Kansas

**SUMMER STUDIES MAINE COAST**

College of the Atlantic in Bar Harbor, Maine offers six courses in its 1977 Summer Session: Marine Mammals, Mushroom Identification, Poetry Workshop, Flora of the Maine Coast, Why Wilderness?, and Maine Coast History and Architecture. For information write: Director, Summer Studies, Box 5, Bar Harbor, Maine 04609.

- 1. Reference/Research Services
- 2. Equipment Testing
- 3. Custom Outfitting
- 4. Personal Buying

**THE LOON PEOPLE**



Outdoor/Wilderness Specialists

The complete service for people too busy, too lazy to do it for themselves.

Write for additional information P.O. Box 19 Perry, NY 14530

**RICH-MOOR WILSON'S  
MTN. HOUSE**

Complete Stock  
Over 300 items

- ★ 17% Off Retail
- ★ 24 Hour Shipment
- ★ Special Bonus Discounts

Please send 25¢ for catalog to:  
**Trail Foods Co., P.O. Box 9309-F**  
N. Hollywood, CA. 91609  
(213) 763-9319

# Watch out!

**The Snow Lion PolarGuard Product Revolution is contagious!**

On barren peaks, in wooded valleys, on icy slopes or beside quiet streams, Snow Lion sleeping bags made from PolarGuard are spreading across the country like wildfire. Serious backpackers everywhere are coming to realize what professional mountaineers already know—that Celanese Fortrel polyester continuous filament is tough, light, compressible, easy to take care of, warm even when wet and long lasting.

Snow Lion's sophisticated outdoor products, made from PolarGuard, have revolutionized modern day thinking about lightweight insulating systems. Advanced construction methods such as our unique double and triple layer "Offset Quilting" have set new standards in sleeping bag design.

Over forty major worldwide expeditions have decided to purchase equipment made of PolarGuard during 1975/76. If the PolarGuard bug hasn't got you yet, and you'd like to find out more about

Snow Lion sleeping bags, parkas, vests, pants, booties and mitts, write for a free catalog and the name of your nearest dealer.



**Snow Lion**  
P.O. Box 9056, Berkeley, Ca. 94701

Fortrel® and PolarGuard® are trademarks of Fiber Industries, Inc., a subsidiary of Celanese Corporation.



**"On K-2, the second highest mountain in the world, blizzard conditions kept us zipped in our sleeping bags of *Dacron*<sup>®</sup> fiberfill II... day and night for six days..."**

**JIM WHITTAKER, leader of the 1975 American assault on K-2.**

"We were using a man-made fiberfill at altitudes where down had always been the traditional choice.

"But our sleeping bags and parkas of 'Dacron' fiberfill II performed perfectly. Just as I expected them to.

"Don't get me wrong. I'm not anti-down. In dry cold you can't beat it. But down can collapse when it gets wet. It can lose its ability to insulate. 'Dacron' fiberfill II is different. It can be fully saturated, and then wrung out and, like wool, still

provide some insulation.

"On the K-2 expedition, we encountered most of the wet conditions on the approach march. And we simply draped our sleeping bags on top of the tents to dry.

that the real test came. We had to live in our sleeping bags day and night for six days. And we appreciated



every one of those 500 miles of hollow fibers that ran through every pound of 'Dacron' fiberfill II.

"Du Pont's 'Dacron' is the only fiberfill that has these hollow fibers. It's interesting to note that caribou is one of the best furs for arctic wear... and this fur has hollow follicles. Hollow fibers add loft without weight. And loft helps determine warmth.

"It's a pretty smart idea. And 'Dacron' fiberfill II proved it... on the second highest mountain in the world."

You'll find most manufacturers of sleeping bags offer Dacron<sup>®</sup> polyester fiberfill II in quality-

constructed models. Usually at very affordable prices. For a list of suppliers and more details on the advantages of hollowfill write us: Du Pont, Dept. SB, Fiberfill Marketing Division, 308 E. Lancaster Ave., Wynnwood, Pa. 19096.



Unique hollow filaments of 'Dacron' fiberfill II



\*Du Pont registered trademark.  
Du Pont makes fibers, not sleeping bags.