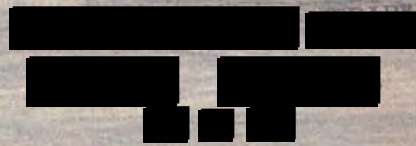
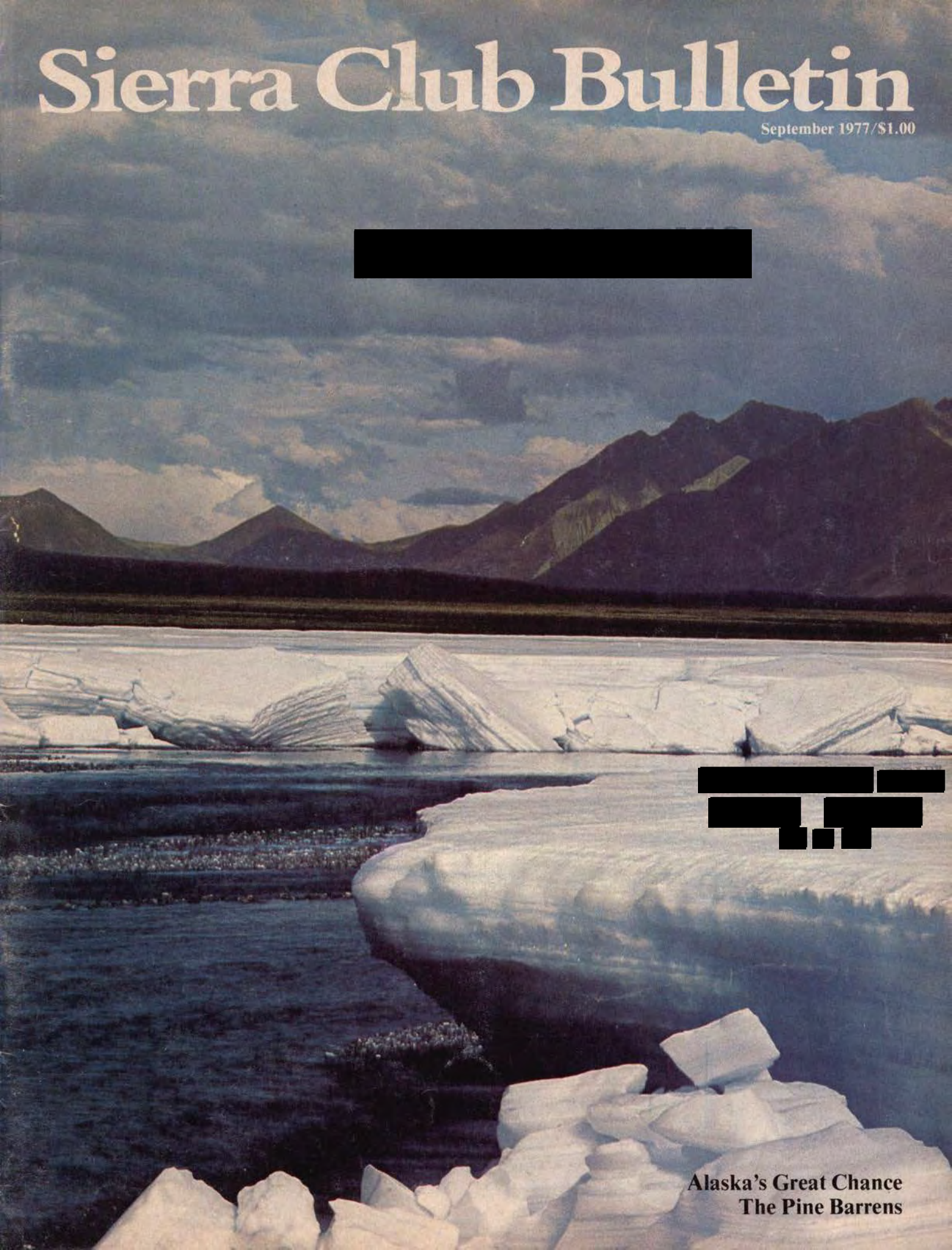
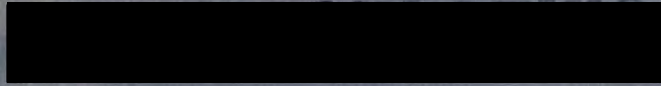


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Cover: Alaska, Summer thaw on the Canning River in the Arctic Wildlife Range. Photograph by Peggy Wayburn

It's Not So Barren in The Pines

JOHN G. MITCHELL



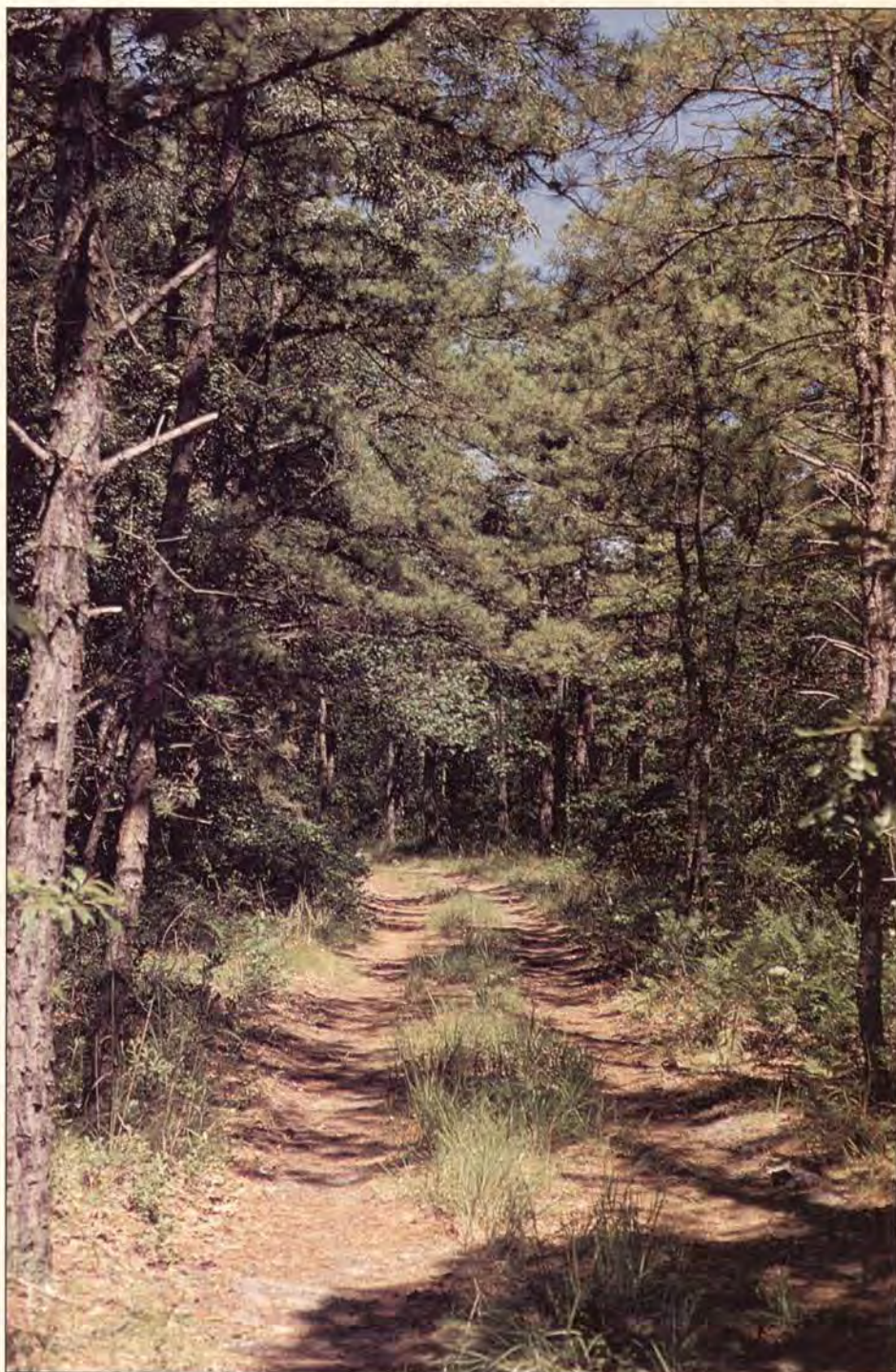
George T. Schupp, Jr.

An old grist mill and an iron ore barge in Batsto village.

If one were to lay a straight-edge along the axis of America's most densely inhabited supercity, the center point would fall on or about Jenkins, New Jersey. People once called the east-coast megalopolis "Boswash." But "Richport" seems more like it now, since the little boxes and all the urban demographics that go with them already sprawl from the Virginia hillsides of Richmond to the precincts of Portsmouth, New Hampshire, where, Governor Meldrim Thomson to the contrary notwithstanding, the likes of God's Country do yet miraculously prevail.

As for Jenkins, New Jersey, its centrality to Richport is somewhat deceptive and strictly geographic. Jenkins sprawls nowhere. You pass through it on a two-lane thoroughfare in half a minute. The population is 45. Haines' cranberry bog is up the road a piece. Mick's Gulf station sits by the roadside, dispensing soda pop and aluminum canoes. The canoes are for rent. The canoes at Mick's outnumber the people of Jenkins four-to-one. Strangers from the more densely populated parts of Richport—say, from Philadelphia and New York—come to Jenkins to float the Wading River, or the Oswego, or the Batsto, or the Mullica. In the heart of Supercity, sweet water meanders to the sea through dense stands of Atlantic white cedar, red maple and black gum, through dangleberry and greenbriar, sheep laurel and turkey beard. And back from the watercourses, low sand hills roll in every direction under pitch pines and blackjack oaks. Philadelphia is only thirty-five miles away, northwest. Manhattan is seventy miles, northeast. South twenty miles are the budding casinos of Atlantic City, New Jersey's Las Vegas-

John G. Mitchell, former Editor-in-Chief of Sierra Club Books, is a free-lance writer and a field editor for Audubon.



Joseph L. Lomax

The "Pineland Highway" to Martha's Furnace, in The Pines.

by-the-Sea. Yet here you are in Jenkins, epicentered on the largest, strangest, wildest, richest, most precious, most vulnerable, least protected, least celebrated body of open lands remaining in the eastern U.S. In short, the Pine Barrens.

In historic halcyon times, before Rich-

port began to glue itself together with interstate highways, the Pine Barrens covered a quarter of New Jersey. There has been a good deal of shrinkage in recent years, but the unfettered area is still substantial. In the East one does not scoff at 1,500 mostly forested square miles, nearly



Robert C. Hughes

A cedar bog in The Pines.



Joseph L. Lomax

A cranberry harvest in The Pines. An elevator lifts the berries from the bog to waiting trucks.

one million acres. Or in the West either. Not when one could take Kings Canyon, Sequoia, and Arches national parks and drop them side by side into the Pine Barrens with room to spare. This is not to say that the Pine Barrens constitute a wall-to-wall wilderness. It would be more accurate to

describe The Pines' pine-oak forest ecosystem as a set of scatter rugs, ranging in individual size from 1,000 acres to a 100,000 or more, the whole lot distributed generally across south-central New Jersey between the Garden State Parkway on the east and the industrial outskirts of Cam-

den-Philadelphia on the west. Tucked away here and there in The Pines (a term preferred by local folk over the pejorative and inaccurate "Barrens") are a handful of mapped settlements not unlike Jenkins: Bulltown and Atsion and Tabernacle and Friendship and Retreat, among others; a few unmapped outposts such as Speedwell and Hog Wallow, and three or four truly operational villages such as New Gretna and Chatsworth, the latter of which is generally conceded to be the First City of The Pines. When *New Yorker* writer John McPhee visited Chatsworth a decade ago (with splendid results: *The Pine Barrens*, Farrar, Straus & Giroux, New York, 1968), he counted "three hundred and six people, seventy-four houses, ten trailers, a firehouse, a church, a liquor store, a post office, a school, two sawmills and one general store." To the best of my knowledge, no one has undertaken so comprehensive an inventory since then. And possibly no one needs to, for Chatsworth remains pretty much the same.

It is a different story on the edges of The Pines, for there the fabric of wild places and backwoods ways is fast unraveling. In Ocean County, northeasternmost of the six counties that make up the Pine Barrens, some eighty percent of the state's retirement communities are now located or a-building. On the west, pines are falling under the creeping exurbs of Camden. And on the south and east, tidewater communities are girding for the growth that is certain to come with onshore facilities supporting offshore oil development in the Atlantic's Baltimore Canyon. New Jersey is already the nation's most densely populated state, 953 humans to the square mile. In The Pines region, however—and this includes the larger towns on the edge—the density drops to about 135 per mile; in the interior, near Jenkins, it drops to fewer than fifteen. The people of The Pines want to keep it that way. They do not want to be stacked up like cordwood. They want Retreat, not Richport. And, not so curiously, a number of people who are not residents of The Pines want to keep it that way, too; they know that should Richport come to Retreat, the pines and the cedars, sweet water and salubrious air will be finished, and nothing to show for what now is the best-of-what's-left on the northeastern seaboard.

The Pines are unique. I know that is a hackneyed, shopworn claim too often bandied about in the rhetoric of landsaving. Some time ago I promised myself that I would eschew such hyperbole forever. I break the promise here because I have to. The Pines *are* unique. Nothing quite like this forest exists anywhere in North Ameri-

Continued on page 26

Why There Are

A Conservation Victory

To the popular mind, Nashville is a city of country and western legends: Grand Ole Opry and the rustic-baroque palaces of stars like Loretta Lynn and Dolly Parton. But Nashville is also an educational center, home to some twenty colleges and universities. Nashville has also earned the recognition of conservationists all over the nation. In the face of the growth mania prevalent in most booming southern cities, Nashville has preserved a remarkable wilderness within the city boundaries.

The 940-acre wilderness is the Radnor Lake State Natural Area. Surrounded by residential neighborhoods, the preserve consists of an eighty-acre lake nestled among the hills of a magnificent hardwood forest. It is now a state-owned natural area protected by the Tennessee Natural Areas Preservation Act.

The dense forest on the slopes and hill-crests surrounding the lake contains a remarkable variety of plant life, including an abundance of wildflowers. Parts of the area were logged fifty years ago, and the forest has now reached an intermediate stage in renewal. Since the lands lie in a transition zone between mixed-mesophytic association to the east and the oak-hickory association to the west, the trees found are quite diverse, with some fifteen species dominant, including oak, hickory, ash and walnut.

The diverse ecological systems at Radnor Lake provide a haven for a variety of wildlife, including seventeen species of reptiles and ten species of amphibians. Mammals found in this urban wilderness include deer, bobcat, fox, weasel, otter, and mink. Some seventy species of birds breed there, and 140 other species are regular visitors. The grebe, green heron, blue-winged teal, wood-duck, and kingfisher are lakeshore residents, and many other breeding species inhabit the meadows and forest.

Radnor Lake is not natural—it was created in 1914 by the L & N Railroad to furnish a nearby yard with a supply of soft water for use in steam engines. An earthen dam across Otter Creek created a lake, which water birds began to frequent on their migrations. After a brief interlude when hunting almost drove away the birds, the railroad made the area a wildlife sanctuary in 1923. The disappearance of the steam locomotive eliminated the railroad's need for the lake, and the area was sold to Oman Construction Company in 1962.

The area would have succumbed to

Robert S. Brandt, a trial judge, formerly chaired the Club's Tennessee Chapter.



Radnor Lake, Nashville, Tennessee.

development but for a fortuitous zoning restriction. The area was zoned for single-family houses, but the high cost of the land made building apartments more attractive to developers. Local citizens forestalled development by insisting on enforcement of the zoning restrictions.

This was, of course, a stopgap measure.

People realized that the wild area would eventually be lost if permanent protection could not be provided. The 1971 Tennessee Natural Areas Preservation Act finally came to the rescue; it allowed the state to acquire unique natural and scenic areas for permanent preservation. In early 1973, then Governor Winfield Dunn took an

Deer in Nashville

ROBERT BRANDT



Minutes from downtown Nashville, a tranquil scene.

active interest in adding Radnor to the natural-areas system and approached Oman's executives, only to learn that the company had sold an option on the Radnor property to a developer who was planning a massive residential development.

Preservation efforts intensified as word of the development spread. By March 1973,

thousands of residents had signed a petition opposing any zoning change that would allow the development and calling for Radnor's inclusion in the state's natural-areas system. Then in April, sensing that the public's opposition to rezoning would prevent any change, the developer agreed to sell his option to the state—if he

were reimbursed for his expenses. That boosted the total cost for the Radnor property to \$3.5 million dollars, with July 1 set as the deadline to raise the funds.

Through some masterful bureaucratic maneuvering by the governor, the local congressman, and officials of the State Conservation Department, slightly less than 3 million dollars in state and federal funds was acquired by July. In the meantime, State Senator Doug Henry, a Sierra Club member, pushed a bill through the state legislature designating Radnor a state natural area. The developer extended the deadline for payment to August 16. On July 19, the Radnor Lake Preservation Fund was created; it had to raise a half-million dollars entirely from private contributions in just three weeks!

Hundreds of citizens participated in the effort. The president of the company that owned the land kicked off the fund-raising campaign with a \$100,000 contribution, which lent needed prestige to the effort within Nashville's business community, and many sizable contributions followed from corporations and individuals. Vanderbilt University, whose observatory borders the Radnor lands, gave \$100,000.

But it was the efforts of countless citizens and small contributors that demonstrated how people can make a difference. Many groups, including the Middle Tennessee Sierra Club group, went door-to-door seeking funds. Local McDonald's restaurants gave away food in exchange for Radnor Lake contributions. Nashville's music industry pitched in. College environmental groups collected and sold recyclable aluminum and donated the money to the fund. A wildlife artist reproduced 1,000 specially prepared prints and sold them for a minimum \$100 donation. The list could go on and on. The entire city was astir with efforts to raise money to save Radnor Lake.

And they succeeded: on August 15, 1973, the preservation fund's treasurer presented checks to the Department of Conservation for \$350,000 and to the developer for \$114,000. The state, using the combination of state, federal, and privately raised funds, paid the \$3.4-million purchase price.

Now, a scant mile from an interstate highway and surrounded by urban sprawl, the Radnor Lake State Natural Area is a tranquil monument to Nashville's conservationists. Radnor is not a park; it has no picnic areas, ballfields or golf courses. Rather, it is both a sanctuary and an unequaled biological laboratory for Nashville's colleges and universities. The saving of Radnor Lake and the manner in which it occurred stand as a constant reminder of what citizens can accomplish if they care enough. Congratulations, Nashville.



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of our environment,
if we can exercise responsibility to ourselves
and future generations,
then we will survive as human beings.*

A Conversation with Bill Futrell

FRANCES GENDLIN

FG: I'm delighted to be here in Georgia, Bill, despite having gotten drenched on our walk at Panola Mountain State Park yesterday. It was beautiful, and I thank you for showing it to me. Can you tell me more about conservation in the South, perhaps where it's been for 200 years and where it is now?

BF: Two hundred years of conservation in the South is a course in itself. *Bartram's Travels*, which is William Bartram's account of what Georgia, the Carolinas, Florida and Alabama were like in 1776, describes northeast Georgia as the site of the grandest forest he saw on the North American continent. He describes great avenues of trees that formed a cathedral, the trunks forming the naves, the first branches sixty feet from the ground. Those trees are gone. Right after Bartram wrote, during the next two decades of colonial expansion, half the topsoil in Georgia washed away. What finally saved the remainder was the succession of loblolly pine in the piedmont, and slash pine in the coastal plain. William Faulkner said that three great crimes mark American society: ravaging the land, killing the Indians, and African slavery. These all happened in the South. On the other hand, the southerner has great individual identification with the land. Most southerners point to a place, even if they grew up in a city, and they say, "this is where my family comes from." They can identify back several hundred years with a place, or easily several generations.

SG: Hasn't there been as much movement in the South as in other parts of the country?

BF: There has been movement, but the extended family has remained definite. Out of four or five brothers, one will certainly keep up the home place; there is also a closeness between nephews and uncles, so that there is an awareness of where they



came from and who they came from. Now, as for specific conservation crusades, citizens' activities, they haven't been a strong theme in the South.

FG: Then how did the Sierra Club get started here?

BF: The Club here was an outgrowth of the environmental concerns of the sixties. I was responsible for organizing eleven of the Sierra Club groups in the Southeast.

FG: When was that?

BF: In 1968. I joined the Club in 1962 when I came back from East Asia at the end of my Marine Corps tour of duty. I was in San Francisco and was looking for an affiliation with an organization that went to the mountains. When I was a boy I belonged to the Boy Scouts, and I got to know the woods and forests of Louisiana, my native region. Then the Marine Corps gave me many delightful outdoor experiences.

FG: Is that what we call war?

BF: No—many experiences in a variety of habitats—rice paddies and jungles, mountains and desert. While in East Asia, I taught a school in survival, escape, and evasion. I think of what I'm doing in the Sierra Club as being a kind of survival school. In those Marine Corps days as a forward observer, I could just relax with a paperback novel at my side and binoculars, and enjoy the sunshine out on a high bluff. Somewhere along the way, mountains became a symbol of the supreme outdoor experience. I no longer feel this way, for I value marshes and swamps as much as I do mountains. But that was in 1962 and I was really sold on mountains. So, being in San Francisco, I went by the Sierra Club office and joined. Then in 1968, I wrote a letter to the membership department when my wife joined. We lived in New Orleans, and we asked where there were some good places to visit. Somebody wrote back and said they didn't know anything about New Orleans or Louisiana, but they sent us names of six members in the state and suggested we contact them. It was also suggested we form a regional group. So I got those six people and some of their friends together for coffee on a Sunday evening, and we decided to go ahead with it. Now the New Orleans group has about a thousand members, and it has become a very strong force for conservation.

FG: Yes, and now in general our demographics have changed so that we're not just a western organization, but a national organization and an international force. Fifty percent of our members are west of the Rockies and the rest east. Yet we don't hear that much about what's going on in the Southeast.

BF: Oh, I'll differ with you on that. The Club has four southern directors: Ted Snyder, Ellen Winchester, Denny Shaffer and myself. You have heard about offshore

oil drilling in the Gulf of Mexico; there have been several articles in the *Bulletin* about that. Jim Moorman and Carl Holcomb, both southerners, were leaders in getting reforms embodied in the National Forest Management Act of 1976. That act, regulating tree cutting, is addressed in great detail to the Appalachian Forest which stretches down to Georgia. I've been involved in the pesticides issue, as have others here who have allied themselves with the Environmental Defense Fund and other such organizations. I was also co-counsel on the Mirex proceedings.

to "Regional Reports," and we can report on any current regional issues anywhere. But it seems to me that the other areas, until this change, have carried much more weight than the Southeast.

BF: Well, the South now has the president, the secretary and the treasurer of the Club. We don't feel underrepresented.

FG: What current issues are going on in the South?

BF: Backing up President Carter on water resource projects. That list cuts across a number of southern states and touches on some of our keenest interests.

councils and, as we find them, we work toward a resolution of many problems.

FG: This gets into the question of adversary relationships. It seems clear that some that have been termed adversary relationships must cease now, and that whatever "side" you're on, people who think are coming to the same realization. Yet we don't know exactly how to proceed. But there is a growing realization on the part of labor, for example, that despite our past differences, we must now work together. I'm becoming involved with labor groups in the San Francisco Bay Area, trying to set up conferences to devise particular projects we could work on together. I know we have to work together with the major corporations too, yet the public view is that our two groups are consistently adversaries.

BF: The nature of adversary relationships is overstated. After all, much of our membership and leadership comes from people in the business community—merchants or professional people. I was a business lawyer before I became a law professor. I divide my teaching time into two-thirds environmental law and the rest corporate law. And I follow very closely, through meetings and conferences, through reading the *Wall Street Journal* and business magazines, what the American business community is thinking. Reconciliation is the attitude of the more enlightened sector of the business community. Yet there is another substantial sector with whom we have to deal in Congress, whose attitude toward us is that we are a temporary phenomenon they can outlast.

FG: There are still some people who think we should not be allied in any way with corporations.

BF: I disagree, and I think most of our leadership disagrees. We look for allies who will speak for environmental quality anywhere we can find them. We are allied as coplaintiffs with railroads to stop a Corps of Engineers project, Locks and Dam 26. We are speaking out on the Arctic gas pipeline on the advantages of the Alcan route because it is the least environmentally hazardous. When I talk to industry groups, I suggest that when they are engaged in their efforts to secure a permit, for instance, they should consider which is the better environmental alternative, and that considering the environment should always be one of their strongest concerns. And then, they should look to us as allies. We don't have blinders on as far as they're concerned. The Club's alleged anticorporateness is something that some people in the business community have invented to smear us with.

FG: What issues are you personally involved with now?



Delegate Futrell at the United Nations Water Conference in Argentina confers with the Chief U.S. delegate, Ambassador Nancy Rawls.

FG: Can you tell me why we don't have a southern "rep"? We have staff representatives in the Northwest, Southwest, Northern Plains, Midwest, New York and California. Why not in the Southeast?

BF: We don't have a southern rep because of a disagreement among the southern directors. Some want one, some don't. We have a very strong volunteer effort here, and there is a feeling that they don't want to have a staff person down here, that they'd rather use the money in other ways. I disagree.

FG: Until recently, in the *Bulletin*, we've had columns called "Regional Representatives' Reports," and the Southeast was thus notably left out. We've changed that now

FG: And others?

BF: There's the continuing issue of clear-cutting in the national forests and arriving at a workable forestry policy. The South is seen by the timber industry as this country's wood basket of the future. Here in the South, our forests can have a thirty-year period of rotation, something you don't get on dry, high-altitude, western soils. What quick rotation does to the soil we don't know. The whole question of scientific forestry is a vital one. The Sierra Club, being a tree-oriented organization, has a great future in the South. Parenthetically, it is not my attitude to regard people we come in contact with in the timber and mining industries as enemies. Sooner or later we find enlightened people in their

BF: Energy conservation and support of the President's energy program. We have a president who has taken the initiative in addressing what we have labelled as one of our first priorities. He has come up with a plan that we are about seventy percent in agreement with. And rather than nit-picking, we are going into Congress with our representatives and our support and doing what we can to support the energy program. There is division in the environmental community. Some of the groups are denouncing the President's motives, saying that the plan is a charade to bring in nuclear power, that he really isn't interested in energy conservation. This is extraordinarily counterproductive. For the first time in years, we've got leadership that has defined goals we believe in.

FG: Do you think some of these other groups who are, as you say, "nitpicking," are getting stuck in what has historically been an adversary relationship between citizen groups and the government? During the last eight years we've had an unresponsive administration, and now we have a President and an administration who are positive about the environment. Do you think we're going to have to take on new roles and a new awareness of the kinds of strategies and directions we want to take with this government?

BF: I agree with the thrust of your question, but not with some of the shadings of meanings. It's not an established historical pattern. In prior administrations, we've had people in the executive branch who gave a lot of encouragement to conservation: John Kennedy supported the Wilderness Act. Lady Bird and Lyndon Johnson worked to strengthen the park system.

FG: Some twenty-five years ago, though, President Eisenhower said that water pollution was a "uniquely local blight."

BF: Well, it is. It makes you uniquely, specifically miserable where you are. But let's talk about the past eight years. The conservation movement did become increasingly assertive and pointed in its attack on the administrations. We talked about lawless agencies that would not follow their own directives. We've seen government officials attacking environmental activists by name in their home communities. That has changed, certainly. We have a different team. I do think what's happened on the Carter energy program with some of these other environmental groups is that they are prisoners of the past, that by disagreeing, feeling a need to be true to themselves, they have chosen to dramatize their differences with the President's plan, rather than pointing out the agreements. We too have our disagreements with the plan, and we have made them clear.

FG: What are they?

BF: We are concerned about the reliance on nuclear power, and we don't think the plan moves toward energy conservation strongly enough. The language of sacrifice is gone, and I don't think we're going to have a successful energy conservation program until there is some sense of sacrifice in the public's attitude and in the plan.

FG: I'm not sure about that. . . .

BF: But, the situation in Congress is such that all the special interests are lined up, and the halls are full of industry lobbyists. I've spent a few weeks in Washington this past month working as a Club representa-

our attitudes generally. It's under attack in Congress. What do we do? Well, we call people from around the area to come in to lobby. Ellen Winchester, who chairs our energy committee, finds herself spending three or four days a month in Washington. And then we find money tucked away that might hire a lobbyist, month by month, on a minimal salary. We have made budgetary adjustments to bring more people in, just to work on the President's program. We can't match the American Petroleum Institute with its hundreds of employees, but we do have a team of about seven in Washington, supplemented by volunteers who can

We look for allies who will speak for environmental quality anywhere we can find them.

tive lobbying on these issues. Generally, business has had the most expensive lobbyists per congressman. The oil companies, the utilities, the automobile companies, are all being asked by the President's energy program, to upgrade their operations, and they are all fighting for their special interests.

FG: What about the Sierra Club?

BF: Let me talk about how the Sierra Club reacts and how it's flexible. We are under tight budgetary restraints. We have a budget of \$8 million. We could spend \$80 million. I would know how to do it and the rest of the leadership, too, would know how to do it and spend it well. But from our actual \$8 million budget, only a relatively small percentage goes into direct lobbying efforts. The major percentage goes to support activities such as the *Bulletin*, the books program, the outings programs, and the whole infrastructure of member services in the Club. In addition, we have commitments to the clean-water campaign; there's a 1972 water bill that is undergoing revision. We're tied down with commitments on the Endangered American Wilderness bill, which is one of our major priorities. We have a historic opportunity in Alaska, and we will regret it all our lives if we don't do all we can to see that it's implemented by creating new national parks. Our every dollar is spoken for a number of times.

FG: So what do we do?

BF: We have a dramatic energy proposal by the President, which goes along with

fight the entrenched lobbying establishment.

FG: A while ago you said that people are going to have to sacrifice, and I want to talk more about that. I'm not sure about that. I think what we're really talking about is a return to old conservation values. Until the middle of the depression, historically, people saved everything. They turned off their lights; they didn't waste. And then during the depression, the government tried to stimulate the economy just as it did a couple of years ago in the recession, by asking people to buy, consume. And what that did was instill a sense of artificial values. Now entire generations have grown up with this artificial value system. So what we should really be saying to people is not that they have to sacrifice, but that they have to go back to those values of the past.

BF: Here again, I agree with you as far as you go. Yes, advertising has boosted the throwaway culture, and what we need is not only a sense of sacrifice but a sense of stewardship of resources. But let me go beyond what you said. From the beginning of our history there has been an attitude of land as a commodity—move in, chop it down, burn it up, use it up. We have been a people whose view is that resources are the cheapest part of the equation and that labor is the dearest part. Classically in economics, we have four factors of production: land, labor, capital and the entrepreneur. Today, a fifth one has to be added to all economic thinking, and that is pollution-absorption capacity, the ability of

the environment to absorb pollution. The equation has also changed because land is no longer the cheap-fueling motor; cheap land, cheap resources, cheap timber, cheap oil, cheap you-name-it, are no longer there.

FG: Beginning with the first one, then, with land use. That's something the Club is very active in. Isn't it one of your particular interests?

BF: I teach a land-use course and was chairman of the Club's land-use committee last year. Sierra Club people are strongly oriented toward stewardship of the land. Stewardship is a key concept in all of this. It's a word we should get into our vocabu-

FG: You mentioned the old Protestant hymn. I have a feeling this comes out of a background that's very strong in you.

BF: Yes. It's very interesting how environmental values are acquired. In my own personal experience, environmental values were instilled early on and the basic lessons were learned at an early age. That hymn is perhaps the first verbal lesson I remember concerning the environment. Earlier messages came from my family. I remember one morning when I was five years old, when I was taken for a day of work with my father on the railroad. We went out on an open car, and we were going across a

Club does so well: our book program, for example, speaks to both the emotional and the intellectual. We're truest to ourselves when our environmental message expresses all these senses of stewardship.

FG: But do we do this enough? Sometimes we get so caught up in our daily conservation efforts that somehow the sense of tradition and the sense of heritage get lost.

BF: That may be true, but in the hustle and bustle of life, one needs time to withdraw, to be introspective, to assess where one's values are. A quotation I have used frequently is, "All religion begins in mysticism and ends in politics." While I was in East Asia I immersed myself in learning Japanese and I read, in English, everything I could get on Japanese and Chinese history and literature. One of the great traditions there is that the man of action always withdraws to the willow grove for introspection. In Western society we have the example of Montaigne, who withdrew to his tower; although he talked to his statesman friend, Henri IV, he wouldn't become engaged in the political scene itself. The man of action has to be a man of introspection, and the thinker should be committed to action.

FG: What we're talking about is values. When we concentrate our efforts so heavily on particular wilderness areas or on energy, how can we instill values and talk about the basic motivations of our society?

BF: My undergraduate training was in philosophy. I had a Fulbright in philosophy in Berlin. One of my teachers there was Paul Tillich. He fit in well in the transition from my becoming what I first thought I would—a minister—to what I'm doing now. So I've always had this interest in values. One thing I learned from Tillich was the idea of bearing witness, how one attests to the truth of one's beliefs. The model I choose is not the individual who verbalizes his beliefs, but the one who by action attests to them; who by the things that he or she does, describes a pattern of life that embodies the ideal.

FG: You're saying people have to live their beliefs.

BF: Yes, "live it" is one expression, but Tillich got it from Kierkegaard, who talked of this form of action as pointing beyond one's self—that one's actions point beyond the self.

FG: So how do we get these values to pervade every issue we work on? For it isn't just that we want to save the national interest lands or the Congaree Swamp, we should know the reason we want to save them.

BF: Essential to the Club's whole activity is the outings program. I came to the Club because of its outings program. I came

*Reestablishing natural connections is
necessary for our sense of well being. I think
it is necessary for survival.*

lary. One of the most impressive speeches I've heard on conservation was at the dedication of the first unit of Georgia's state park system. Prior to the Carter governorship, Georgia had recreational parks with cabins, camping, golf courses and lakes for swimming. While Carter was governor, the Heritage Trust system was developed, through which scenic and scientific reserves were purchased. Carter, when he dedicated the first unit of this system, made an impressive speech.

FG: Was that Panola Mountain, where we walked yesterday?

BF: Yes, that's right. Carter spoke of the need for stewardship, the need to recognize that this world of wonder we inherit and which we inhabit as citizens is a mighty charge to care for and to be handed on to future generations. It is clear that the President believes in justice between generations; that this generation has an obligation to future generations. That is as good a definition of stewardship, perhaps, as we've arrived at. And it is the sense of stewardship, in my viewpoint, that marks the environmentalist. Listening to Carter, I heard overtones of the old Protestant hymn: "This is my Father's world/I rest me in the thought/of rocks and trees, of skies and seas/His hand the wonders wrought." If we can emphasize the message of stewardship more in our addresses to the public, I think some of our basic problems of confrontation will drop out of the picture, because there is a hunger in this country for a definition of spiritual values, and this message of stewardship is central.

causeway, across a swamp. All of a sudden the water was filled with ducks, the water was black with ducks and they rose in the sky against that dawn, and it's one of the sights I remember most strongly from my youth. When I think of my father, I think of that dawn with the ducks rising, when my hands tightened on his shoulders. It's a memory that came back clearly many years later.

I was with my family a few years ago in New York. Having finished the meeting I had come for, we went the next day to Montauk Point, at the tip of Long Island. We're very serious bird watchers, the four of us, and we were looking for various eider and sea ducks. My children love to beachcomb, picking up rocks and shells. They were finished doing this, and we were heading back to the motel. We beat our way up off the beach and over the dunes and as we crested one dune and I was carrying my son on my shoulders, we came to a pond, and there was a great whistling swan there, wintering from his summer grounds in Montana. He rose up out of the water, stretching his long neck and his great wings forward. Then I felt my son's hands tightening on my shoulders, and I remembered my own father, that morning long ago.

FG: So you had a sense of values being transmitted from generation to generation.

BF: Yes, maybe it's an aesthetic sense, but I think at this early point of human development, the aesthetic, the intellectual, the religious, and the emotional—all are so closely akin to each other that there can be no distinction. This is one thing the Sierra

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because the Club showed me the way to the mountains, because it published Starr's *Guide to the Muir Trail*. And many Club leaders have this interest in the outdoor programs. In one of the Club's books, *On the Loose*, two young men make this statement: "We say we know Point Reyes. We say we know Yosemite. What we mean is we know ourselves better because we have been to Point Reyes, because we have been to Yosemite." For me, it is the Grand Canyon. On my way to East Asia I stopped at a number of places. At the Grand Canyon one morning, I walked down to the bottom and up the other side—a very long, long

I'm going to die . . . not then and there . . . but I'm going to die, and at the same moment came an absolute, fundamental conviction that I am, and I fully exist as much as this canyon and this solid rock at this moment. So when I say I know the Grand Canyon, what I really know is the experience of walking down to the bottom and up, of feeling the rock and the sky and my own existence.

FG: This same thing happened to me in Jerusalem, where I came to understand the continuity of time and my place in it, when I stood in the Old City, at the church of St. Anne. There were the ruins of a pagan

book that says it happened because we are divorced from agriculture, from the land, from our connections—maybe we are trying, environmentalists, to reestablish this connection?

BF: Obviously, I think the experiences I am talking about are the opposite of the messages carried by most novelists of alienation. I have seen the world they're describing; intellectually I know it, but I'm pointing to something different.

FG: Isn't this our message?

BF: Well, except that I'm suspicious of being too doctrinaire. A message doesn't excite me. I'd rather point to something and not formulate it as a message.

FG: Isn't that just different language?

BF: Ah, it may be different language, but I am wary of the ideologue. I'm suspicious of ideology, and I'm suspicious of an environmentalist ideology. Every time it starts to get pat, I'm glad we have our emphasis on the outings program. Let the ideologues be rained upon, let them sweat a little bit.

FG: Is this what happened to me yesterday at Panola Mountain? Did you take me out to be rained upon?

BF: Let them get lost in the woods and get ticks. It's all very good for ideologues.

FG: Nonetheless, you mentioned before that the Club is a tree-oriented organization. Do you see wilderness preservation remaining as the Club's central, unifying theme? I mean, if the ozone layer becomes weak and we run out of fossil fuel, what's going to happen? Will wilderness matter?

BF: Like Antaeus, so long as the Club sticks to the ground, it's got its strength. And when the Sierra Club gets away from its basic concerns, it loses its strength. It's all right to get up into the ozone layer for occasional sorties, but the Club's going to be strongest when people are talking about things they know, are in direct connection with. When they are in connection with these things, they are also going to extend themselves to talk about the ozone layer, because Sierra Club people believe, as John Muir said, that everything in the universe is hitched to everything else. So, people who are interested in wilderness preservation are going to wind up eventually concerned about the ozone layer.

FG: Perhaps I'm really asking if our emphasis isn't too narrow, if in some way we shouldn't broaden our concerns. Don't we often get too far into specifics?

BF: No, I don't think so, because the only way one learns is from specifics. From individual campaigns, from individual political causes, from individual experiences with nature, we learn single truths we are able to use. But you keep seeming to suggest that you want to convert the



Bill Futrell with his children, Daniel and Sarah.

hike. Coming up with a full canteen of water, having passed the heat of the day down by the banks of the Colorado River, I met a family at the top of the inner canyon only about twenty percent of the way out, with miles and miles uphill still to go. A teenage girl and a woman supporting a man staggered under great difficulty in the heat. They had no water. I shared mine with them, and so I rationed myself. I got to one of those great overlook promontories and crawled under a large overhanging rock, and I looked down maybe a hundred miles of canyon—purple and red, yellows and blues. Above me on the wall as I looked around were fossils in the rock, and the absolute conviction registered on me that

church, and a few feet away was the cistern where it is said that Jesus cured the infirm man, and you could see where the water level had been a thousand years before. And right there in the same place were the ruins of an early Christian church—perhaps second century—and there was a magnificent Crusader church of the twelfth century. When I was there the Franciscans were restoring it. And I was there! And I understood about the continuity of time, and that I'm going to die, and that I have a place and it's right here, now. I wonder if this experience doesn't have something to do with land, in a way. When we read novels about this society's alienation from soul, from self, and Wendell Berry's new

David Hennings, Athens Newspapers, Inc.

rest of the world to the way the environmental movement thinks.

FG: Why not?

BF: I'm leery of preaching, of doctrinaire formulations and of the received truth. This is why I use the terminology of bearing witness, of pointing to a better solution. That sort of approach necessarily means individual campaigns, setting aside a park area and exercising stewardship, for one's self and society.

FG: I'm not talking about preaching so much as I am about moral responsibility. Can't we somehow get people to embrace a moral responsibility toward the environment in their daily lives?

BF: One would hope so.

FG: By this pointing beyond oneself? How does it come about?

BF: One means of instilling values is the law. The law is a teaching mechanism because it formulates a general rule that people can learn. As a lawyer, someone who has drafted laws and worked for judges in enforcing them, let me say that one of the concerns of the judiciary over the years is public acceptance of the law. If the law becomes so burdensome that people won't follow it, that leads toward a general disrespect for the law. In drafting laws one has to be concerned with their enforceability and their social acceptability.

FG: I've always been under the impression that the law has to be about fifty years behind society, for if laws kept up, how do we know we wouldn't enact one trendy law after another, just on the whim of the moment?

BF: The legislature moves in response to the felt needs of society. We have an ebb and flow in laws—in consumer laws and tax laws and laws regulating business. One of the encouraging things over the last twenty-five years is the steady progression of laws involving environmental quality.

FG: Let's talk about the Club again, for a while. What directions do you see us moving in during the next few years?

BF: We'll continue to consolidate our position as a national conservation organization. We have 300 groups spread throughout every state in the union. These groups will grow stronger. Perhaps the greatest challenge will be quality control—in our publications, in the statements we make before legislative committees, in the outings. Having expanded across the country and built this exciting, extraordinary volunteer structure, we want to see it grow. I hope to see a Club membership of 250,000 at the end of three years. Membership has picked up in the last eighteen months or so. We're growing at the rate of about eight percent a year. I'd like to see that become ten percent a year. We're at 175,000 mem-

bers right now and we're going to be pushing for 200,000 by May 1978. As president of the Sierra Club, my greatest concern is not whether we win or lose on some congressional vote, but the health and welfare of our growing volunteer forces. I've been very impressed over the past four or five years with our staff as it becomes more and more professional. I think we have the best staff of any citizen-type organization. Bright, energetic and committed, they are vital people. We are aware of the pressures on our staff, of the time demands made on them, time spent away from their families while lobbying. But, there are also enor-

ington to present testimony on a subject matter in which one is expert, truly expert. The volunteer's presentation of that expert testimony is made possible because a staff person has coordinated the committee, is following the progress of the legislation and can bring the volunteer in. Later the staff person follows up on what the volunteer has done and coordinates with him. The staff and volunteers support each other. It's a symbiotic relationship. The staff has endurance. They are there, they have continuity, and the volunteers can come in for the intense 100 yard dash and campaign.

From individual campaigns, from individual political causes, from individual experiences with nature, we learn single truths we are able to use.

mous pressures on volunteers, such as the risk of compromising one's professional future by taking an unpopular stand on a key environmental issue in the community. A Sierra Club regional chairman can spend every waking hour doing Sierra Club business, and the Club will absorb that time. One of the things I have never encouraged is for people to sacrifice family values, family time, to sacrifice their professional careers for the good of the Sierra Club, or the good of a cause. I want these people to survive to fight again another day.

I'm concerned with the whole ambience of the Club, with the Club in balance, with its integrity. One of the most pressing needs I see right now is the health and welfare of the volunteer leadership.

FG: You've said this twice. Do you have some sense that it isn't in a healthy condition right now?

BF: I'd say we need to do better. As we've gotten bigger, we've become too bureaucratic. One great danger is that our professional staff will relate to each other and not to the volunteers. They'll talk to others, say at EDF or at NRDC, but forget to get back to a professor of political science in Cleveland who has expressed interest in an issue, has written an expert article on it, and has asked how he can volunteer.

FG: Then can you define the role of the staff?

BF: The staff is our continuity. I said I was suspicious of the Club leaders who sacrifice family values and professional careers to carry the standard all the time. One needs to be able to swing in and out as a volunteer. One is able, as a volunteer, to get one day off from work to go to Wash-

FG: On the other hand, labor and environmentalists in the San Francisco Bay Area have talked about creating an ongoing structure so that whenever a new issue comes up, there will be a steady mechanism for continued discussion. One of the labor leaders said, "Yes, but we never know who we're going to talk to. There's always some different person. When you bring your environmentalists, make sure we know the same person."

BF: Of course we do change chairs a lot in the volunteer structure. There's a turnover on the staff, too. Yet, if you had gone to a Sierra Club meeting five or ten years ago, you would have seen a great number of the same faces you see now.

This matter of staff/volunteer relationships is extraordinarily complex. Each such relationship is different, but mutual respect is a primary requirement in all of them. The staff must know how to use volunteers, and this includes openness in speech and conversation. It would be repugnant to me to have a staff who did not feel they could speak out candidly to the volunteer leadership. I would feel that what was good in the Sierra Club had passed away. Tidy organizational charts have never interested me: openness to communication at different levels is necessary. Absolute candor in easygoing situations, such as we have here, such as in our board of directors and staff relationships, is essential to the survival of the operation.

FG: Do we still have to talk about who runs the Club? Does the volunteer sector run the Club? Does the staff run the Club?

BF: The Club is unique in being an organi-

zation whose board of directors still directs. We have a structure in which, even though the staff people might feel bothered by the volunteers, they must respond because of the volunteers' national standings and impact, and because they sit on the board.

FG: This sometimes leads to strained feelings between volunteers and staff.

BF: Yes, but my observation during the last eight years as a Club officer and director has been that the major interpersonal clashes are not between volunteer and staff people, but between volunteer and volunteer. If your feelings get hurt easily the Sierra Club is not the organization to be a part of, because the amount of criti-

volunteering, that women knock themselves out as volunteers and then, when a staff position comes up, a man gets it.

BF: Well, you are running one of the major programs of the Club and you can look at Mary Ann Eriksen, running one of the most important conservation positions in southern California. If there are women who want high positions in the Club, they should come and interview for them.

FG: Okay, we hear you.

BF: You're going to have to push. The Sierra Club is a very pushy organization. In the Sierra Club you toughen up.

FG: You've mentioned the word bureaucracy and I assume you mean our compli-

the board meetings as chairman of the board. He is the executive director's boss. He's the point man.

FG: What does that mean?

BF: The point man is the one who is out in front, who answers for the Club. I see the president's role, for myself, as sparking and upgrading the volunteer effort. Finding the talent, making sure the talent gets recognized, seeing that the committee structure is made up of people who are going to do the work. Our spokesmen, as volunteers, should maintain a certain level of performance. They should be informed on the subject on which they're testifying. Testimony should be prepared carefully, neatly, with the proper number of copies. They should follow up their testimony with telephone calls or letters. This is professional behavior, and our best volunteers are nonpaid staff, if you will. Quality control of that sort of operation is vital to the future of the Club. There's so much work to do, and there are so few hands to do it. We may have 175,000 members, but only 3,000 are there on the telephone, writing letters, involved. We've got the structure that could easily handle twice that level of activity. There are places at the table that have been set and are prepared for anyone who is willing to join us. There is important work to be done, satisfying work that volunteers will be deeply gratified and proud that they've done.

FG: Why do you think our people can be so particularly effective?

BF: Because our people have gone out and walked the valleys. They have canoed the streams. They are able to testify, show pictures or maps, while the Forest Service brings in some bureaucrat from an office, who has made a decision about an area he really doesn't know or care much about. We can bring first-hand information to Congress, so we score better. This is why we do so well—we're experts.

FG: And our greatest expertise . . .

BF: Is wilderness—is natural values. We've kept wilderness right there at the top all the way through and I think we always will. Because we know it best, we're some of its most expressive spokesmen. It reminds us of where we came from and who we are. And in these campaigns, that's one of the most important things. Winning or losing is important because if we lose, we lose the resource, and it may be gone forever. But more important to me is the fact that we are becoming more human by carrying on this process. Reestablishing natural connections is necessary for our sense of well being. I think it is necessary for survival. If we can exercise stewardship of our environment, if we can exercise responsibility to ourselves and future generations, then we will survive as *human* beings. **SCB**

Like Antaeus, so long as the Club sticks to the ground, it's got its strength.

cism that goes on among volunteers is intense. As Club volunteer leaders we may have our behavior and statements criticized in very sharply worded letters that are distributed to hundreds of people. Sometimes our motives and judgments are called into question. This is part and parcel of free debate that marks the Club. If you haven't had your feelings hurt, you really haven't been in the Sierra Club.

FG: You're saying something I haven't heard much before; pressures on volunteers. We always hear so much about pressures on staff.

BF: Volunteers understand the pressures the staff is under. We have a conscious desire to support our staff. There is enormous patience and self-discipline at the upper levels of the Club and through the middle ranks of our volunteer leadership. This is one of the most impressive things about the Sierra Club.

FG: What about women in the Club? Is there a balance in the leadership?

BF: We have four very articulate women on the board of directors and one, Ellen Winchester, is on the executive committee. She also chairs our energy committee, which along with the wilderness committee is one of the two most important. Helen Burke chairs our Task Force on Urban Problems and is playing a key role in the Club's land-use activities. I have appointed women as task-force chairmen, as heads of major campaigns, and this has had nothing to do with going out and getting a balance. This happens to be because they were the best people there.

FG: In the feminist movement there is some question of the value to women in

cated structure of chapters, groups, RCCs, the council, the board and the staff. Are we committed to this structure?

BF: No, we're not stuck with it. We are streamlining it. I am relying heavily on the ten regional vice-presidents, who double as chairmen of the regional conservation committees. I've told our chapter, group and conservation chairmen that the regional vice-presidents are my right-hand people. There's no way I can relate closely to fifty chapter chairmen and 300 group chairmen, but the regional vice-presidents can. For instance, Roger Pryor in the Midwest knows well the key people there. He's doing a great job in helping me reward the competent and aid those who are not doing so well. The regional vice-presidents have emerged as the Club volunteer structure's middle management. Our volunteer leadership needs a sense of vitality and a sense of priority, which the board and president can formulate.

FG: What is the role of the president, as you see it? What is different about your presidency?

BF: One thing is my background. I am the first president of the Sierra Club to have come up through the ranks.

FG: Really? That surprises me.

BF: Yes, I am the first to have been a group chairman, a chapter chairman, plus an RCC chairman and regional vice-president before going on the board for the last seven years. This background aids me in working with our volunteer management people, the regional vice-presidents and chapter chairmen.

FG: What else?

BF: Of course the president presides at

Rope Climb

Clean It Is: Granite and Sky, Hands and Feet

DAVID BRADLEY

It wasn't quite sleep but a slow-breathing somnolence, while in the dark the ears watch and the eyes follow the wind across the ridges of a half-century. So to snug down once more in a sleeping bag, to snooze in the sound of snowmelt rushing to a lake. Up there a black wedge hacked from a universe of stars. Stars as thick as forget-me-nots, dawn far off.

For days the mountain had watched us as we hiked down from the north. Scrambling over ridges, camping at timberline, we saw it always there astride the skyline. By day its banners of black and yellow rock streamed from the great upsurge of the Sierra crest. By alpine glow its steep shadows showed the chiseling of ice and wind. Few mountains rise more solitary. "Like an axe blade, edge up," father called it when he first climbed it and dragged his struggling offspring up. And I had climbed it once again, years ago before the war. Its silhouette lived in my mind. Now it was here in person.

Bedded down on a bunchgrass meadow at its foot, I tried to retrace those climbs, what we had found going up, but nothing was clear except the immense feeling of it. My flashlight came on blue in the tent. Elisabeth rolled over in her bag.

"What time is it?"

"One-thirty."

"Are you worried?"

"Not much. More like excited."

"Try to get some sleep, Hon. You'll need it for tomorrow."

The body remembers not with the mind but with the solar plexus, a crazy impressionist: shiny slabs falling away to nothing,

a crack zigzagging up into a stormy sky, then that hopeless feeling when the rope—nothing but a pack rope with the cinch removed—was wound round my middle. I was twelve, and the old man was up there somewhere out of sight howling to come on, nothing to it, it was all good.

Still, I reasoned . . . if I could scratch my way up at twelve, and again at twenty-four, I should be able to at fifty-nine. Anyway, we'd see—go have a look, and if the mountain proved too tough, come down. Not a complicated plan.

"You're sure you don't want to go with us?" I asked.

"I'd rather not."

"You made it once before."

"I had to—to catch you. But you know me—climbing scares me. No, you go and have a good time with the boys."

Outside the tent the mountain reposed in its bed of stars.

At 3:30 we got up to make cocoa and oatmeal, then packed our gear. You don't need much: granite, two hands, a companion or two, and a good rope.

You need a dawn too, for the hours before noon count double.

In the dark we crossed the wet meadow,

hopped through a rushing stream, climbed gritty snow to a talus fan, and started up. By now the stars were dimming. Dawn comes in the mountains as a rekindling of creation. Into the void and dark spreads an infusion of pure light; slowly the rims of earth appear. Let there be color! grey washing into pink or pomegranate; then Darwin's flat top catches fire, the Glacier Divide lights up, saffron floods the sky, and the lakes wake up to improvise a spectrum. The first day has begun.

Muir called these mountains "the range of light." Even Muir ran out of dawns to climb in.

Above the talus we reached the first ranks of the peak,

Drawings by Bob MacDonald

David Bradley teaches at Dartmouth. His father, Harold, was an Honorary President of the Club. His grandfather, Cornelius, was the first editor of the Sierra Club Bulletin.

a series of cliffs cut through by ragged gullies choked with blocks. We took separate routes to avoid the danger of falling rocks. None of it looked hard, but at one point I badly misjudged the way. As so often happens, easy ledge leads up to steepening crack, to awkward handhold, and pretty soon a struggle just to stay on . . . in no time at all I had accumulated a good deal of air under my heels; of all the damn fool moves! But at last I managed to haul onto a ledge, and there in my face was a columbine, all its bells ringing. Heck, I thought, it got up here without any struggle; I ought to be able to.

And then from off at a distance came my son Ben's call: "Hey, you apes, get off that rock pile. Good over here."

Ben had found an easy route traversing left, which eventually brought us to the bottom of a wide chute that ran well up on the mountain. Here, still shaded by the crest, we could scramble up from ledge to ledge without difficulty. The lower half of the mountain is metamorphic rock, cast-iron rock blasted by frost and sharp on the fingers, but the climbing is easy. We watched the valleys opening up below us as we climbed, the multitude of peaks pushing up around us. When the chute petered out we'd reached the upper granite and could climb directly to a deep notch just north of the final peak.

We were, I surmised, following the 1904 route of the first climbers. One of father's friends was on that expedition. On the initial try they had gotten themselves hung up airily on the south ridge and had to retreat; on the next day they found the route up out of the notch. Most of the climbs in the Sierra were made in that way, by people with a yen to explore and a rope for the steep places.

Nor has that changed. The mountains are unmarked. No shout remains from those happy pioneer days. The hands depart, the hills abide, and the sun does all the recycling that was meant to be done.

Splendid peaks, each with a craggy character of its own: go meet a mountain as it is (leave the *Climbers' Guide* at home) and you will find it all new.

We were amateurs: myself, Ben, 21, and Skip, a young friend from home. Ben had hiked the White Mountains, but now he found himself living among high peaks. A skeptical student of art, he was discovering art in its original forms: the sculpture of ice and wind, the sudden washes of hailstorms, the chiaroscuro of alpine glow. More than that, I could see in his deliberate step and searching blue eyes that Ben liked this granite company. Friends they would be, all his life. He was learning how mountains make the first ascent of a man.

Skip had never been on rock. A strong young man, he had nonetheless been

bruised by suburban life. He'd come up from southern California after messing about in some college, and he was full of gloomy vapors and talk about "getting it all together." What Skip meant by that catechism I had no idea, but it seemed to me that having to get it all into a light pack and go discover a route where no trails existed was as good a place as any to start.

About six-thirty we reached the notch and crossed over into sunshine to rest and have a bite to eat. To the east, down 8,000 feet, spread out from the tumbled red and



purple canyons was the broad sweep of Owens Valley rising to the maroon scarp of the waterless White Mountains. Desert down there; in part a man-made desert, for the water was being shipped off for the greater good of Los Angeles' swimming pools. But up here—the snowy miracle of the Sierra which the Indians loved so much for summer pasture.

Years ago (but well within my lifetime) the Sierra seemed almost empty. The Piutes had vanished, the sheep had been driven out, and one could take a string of pack animals over the rough trails for a month and rarely meet another party. Meadows were lush with grass, and the streams full of golden or brook trout. All this would last forever, of course—we counted on it. But already there were signs of the change: for example, the trails cutting down through good grass, becoming two parallel wavering lines, then three, then five. I remember father's first experiments to reroute trails around the meadows so that turf would not be cut down and dried out.

Now, since the second war, all that has changed. The wranglers have gone with the Indians and the Basque shepherders; the Sierra is backpack country, in some places so heavily used that one can go in only by reservation.

Still some things stay on. Four especially come back in memory, night by night, as I drift toward sleep: the flare of campfire light on lodgepole; the sounds of water

flowing; the clang of bells across the meadow as the stock moves up toward drier benches; and overhead the jagged silhouettes of mountains. Those four. Two certainly are gone; but two—the important two—remain.

The morning wind was rising from the hot valley now. Day or night, wind is never still in the mountains. We were sitting on a ledge with our feet dangling above a grey glacier and turquoise lake. Up from the glacier the east face of the mountain rises in nearly vertical sheets of granite, deeply fissured and cut into blocks. One glance was all I needed to recall with instant clarity two desperate hours spent on that cliff. That appalling drop—one misstep, two bounces, 2,000 feet to the glacier—and us pinned up there with thumb tacks. The cliff has been climbed, of course, by better men than I; for all that, I could still feel its urgings. And Ben had fallen under the spell. Munching sourdough bread, he'd been studying the spider's web of cracks overhead.

"Old man, how's for trying it up there?" His face was composed, having the gleam of a young climber who has just made a discovery. No doubt Ben was simply listening to the mountain.

I shook my head. "Your Uncle Joe said exactly those words when we were here last time. Anyway, we don't have the gear for that sort of climbing." We carried a few pitons and a couple of carabiners just in case we got ourselves in a fix, but nothing suitable for a prolonged direct-aid ascent.

"It doesn't look too bad to me," Ben persisted.

And it didn't. But everything turns out to be much larger than it looks from below. Cracks fade out in overhangs, blocks turn into two-story buildings. Oh yes, on a breezy brilliant day five of us had been strung up on that wall like laundry on a line while Joe scratched and swatted in the nails. We'd come down cleansed.

"What happened?"

"We got stuck—your mother too—good and stuck."

Ben continued to survey the cliff above. He liked its looks. "Well, I still say . . . next time then. Next time, we bring some iron and try it. Okay?"

It was okay. If I couldn't do it perhaps he'd make the climb with a brother. There is always a next time for mountains.

As for me I had long since given up metallurgical climbing. Bongs, nuts, slings, knives, bolts—they are useful, and good men use them, rock acrobats who balance an ultimate test against ultimate daring. But that isn't the way I want to go to the mountains, driving iron into them. I could understand Ben, though: that gleam is life in a young mountaineer. It doesn't fade,

it just takes on different colors. The excitement of finding a way, making a way, is all there.

We had now only the final pyramid, perhaps another 600 or 700 feet to climb. Back at the notch we unlimbered the rope and tied Skip in the middle. Skip wasn't overjoyed. He puffed and sighed and scowled at the cliffs ahead as though wondering what sort of demented expedition he'd gotten in on. But the route was obvious, at least the first of it. We were at the foot of a shallow basin in the north wall. The basin



rises in parallel ledges that funnel into two deep cracks. No problem here. The cracks beckoned; they had a pleasant echo of familiarity, although the basin looked bigger and steeper than I remembered.

Ben led. Soon we were back in the shadow of the crest, climbing in blue reflected light. The cracks deepened and merged. Finally, we could move only one at a time. Skip payed out the rope while Ben wedged his feet and climbed on his arms. He was approaching a blank wall, what looked like an overhang. Here the summit blocks seemed to lean out and look down at us. That was too much for Skip:

"You mean we're going up that thing? You guys spaced out or what?"

"Faith, Skip. Don't let the rope get snagged."

Ben wedged a loose rock into a crack. He grinned down at us through his legs. He liked the physical effort, the sequence of hand and foot motions that let him slide up over a puzzle of minor obstructions. Soon he gave a cheery shout:

"Hey, hey. All right!"

"All right what?"

"It looks good."

Under the overhang Ben had found some deep cracks, invisible from below, which led upward to the right. He set off, swinging up without difficulty. In one rope's length he was out of the basin and standing

in the sun on a small shoulder, ready to bring us up. The shoulder proved a breezy perch, not much more than room to sit down on, air on three sides and a wide view north and west. Almost straight down a couple of thousand feet we could see four sparkling lakes, the upper one laced white and green with floating ice; we could make out the two tiny flat tents and the white speck of Elisabeth doing laundry out on a rock. We gave her a long halloo; she seemed to wave back some reply, but surely she could not have seen us. Still she would know we were getting up and that all was going well.

Beyond our camp flowed a sheet of granite, scrubbed clean by the ice and showing here and there after a hundred centuries only trceries of vegetation; then more lakes in high benches and the harp-shaped canyons of French and Piute Creeks. Nearby: Darwin's north wall bedded in ice, and knife-edged Lamarck; then the Evolution area, the peaks of Muir Pass, and bluff, black Goddard standing spread-legged against the amber smog of the Central Valley. Nothing seemed to be moving except the exploring breeze.

"You guys," said Skip at last, munching nuts and shaking his head. "Here you sit. But just look at this mountain! Nothing but rocks all piled up any old way, ready to go." He lit a shaking Balkan Sobranie. "What's keeping 'em here? I don't know. You don't know."

The fact that this rock pile had been around for approximately 10,000 years did not impress Skip. He pulled his leather cap down over his nose.

"The way I look at it, there's two kinds of time. The mountain has its time, and I have mine, and I don't want to be *nowhere* around when they come together."

"You want to be lying out on a beach somewhere. . ."

"Right."

"With a book of Zen. . ."

"Or a can of beer."

Skip was feeling better though, enough at least to joke. He'd made it out of the basin without difficulty. He'd discovered that his hands and feet knew their jobs, and seen how a mountain plays its secrets, revealing them only one at a time to those who come close to look.

The next part of the climb was hard, or looked hard, or so my childish memories surged up to tell me: a blade of rock slanting steeply up from our perch, on one side nothing but air, on the other a monkey walk of cracks strung out above the basin. It was the old slab my guts remembered, the fissure zigzagging up out of sight, and Jove up there hurling thunderbolts: "Come on. It's all good." Yet on cooler inspection what was there really? Only good rock, good cracks, solid handholds.

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Ben was unflustered. "Well, who leads? Are you up for it?"

I said I was. After all, if I could shinny up that crack again I knew the boys would have no trouble. At the bottom of the pitch was a kind of alcove cut deeply into the rock, perfectly ordered for a belay place. We cleared our rope, and then Ben planted himself in the alcove where he could brace his legs, placing the coils at his feet.

"All set here. Go see what you find up there."

One more look around, a big breath, a final check of the knots, then I hoisted myself out of the alcove and started up. I was alone—with a rush in a great stillness I was alone with only the everlasting plunging down of the rock beside me and the hollow hush of wind blowing up from the basin. Oh, you could look down into the basin—chewy on skin and bone down there—but you don't look down. You look up, just ahead. Your work is here by your nose, your hands do the looking, and your feet follow.

In places you jam a boot into a crack; in others you grasp the rough granite with both hands and swing out overside, moving up that way. Hands for balance, feet for weight. You pound the rock, feeling for the vibration of some deep looseness. You feel the breeze on your cheeks, the glitter from feldspar in your eyes. Clean it is: granite and sky, hands and feet. Inside, a singing that is both effort and exhilaration. Forty feet up, over a bulge in the slab you see how the route goes okay above, how the crack leads up to a nest of blocks where there is a secure stance from which to bring up your companions.

So for the third time that demanding stretch—each time new, too soon done.

When I reached a safe place I could stand up and look around: tawny summit blocks heaped up against the sky—only a couple of hundred feet of scrambling now to the top. It was good to be alone on the mountain for a moment. The summit pyramid is so balanced that you'd think any winter's ice would pry it loose or thunderstorm shake it down, but there you will find, in a cranny among the topmost blocks, the old metal box containing a chewed stub pencil and a small notebook with curled brown edges where many climbers have written their names going back to the first days. Many a well-known Sierra name: Jim Hutchinson, Norman Clyde, Dave Brower. Easy routes and wild ones. Those hieroglyphics are poetry telling not why but in what way people love mountains, Clyde for example, coming up solo from the glacier. Among them our own scrawled notations: 1928, Father, three brothers and me, 1939, three brothers, Elisabeth, and me.

The rope had hung motionless too long.

Now Ben's laconic voice echoed up the basin: "Hey! Old man . . . you stuck again?"

"Oh no. Wait a minute." I settled myself among the blocks, facing down, taking the rope around my hips and bracing my legs against a boulder. "Okay here. Who's coming?"

"Skip."

"Come on, Skip. It's all good."

Grunting and scraping down below, laughter mixed with curses. Then the rope loosened, and I pulled it in. I could tell pretty well what Skip was doing from the feel of the rope. It would go taut for a



while, then come up in a surge for a couple of feet. More clatter, more cussing. Skip was moving warily, testing everything. Then nothing happened for a long time, just a vibration coming up the rope.

"Hey, Skip, what's going on?"

Ben's comic voice: "Skip's enjoying the view."

"Like hell I am."

The rope pulled suddenly taut. A voice of desperation: "You got me? Here goes."

"I got you."

Soon I could see Skip's leather cap moving below the bulge in the slab, then his face in a grey cloud. Skip was working feverishly, clinging to the rock. I remembered that look on Elisabeth's face when she came up the crack, clutching the rope in one hand and trying to climb with her knees.

Skip stopped below the bulge, spread-eagled, panting, and allowed as how he didn't think much of the place for a vacation resort. But the rope ran tight between us. He could see he was over the worst of it. Soon he was climbing again, more freely now, and when he clambered in among the blocks beside me he was exulting.

"I made it. How about that. I actually made it!"

After a short breather Skip snubbed the rope around a projecting rock and settled down to safeguard Ben.

"All set, Ben," he shouted down. It was a new voice for Skip.

"How'd it go, Skip? Okay?"

"Awww, Ben . . . it's a piece of cake."

"Hey, hey Skip. How we talk."

The rope slacked and Skip took it up. It's good work, handing in a rope. Skip concentrated everything on it, keeping a steady pull and dropping the coils down beside him.

"What's this rope good for?"

"Fifteen hundred pounds."

Perhaps only now, as he felt with his legs the rock he was braced against, as he watched the rope slattering up the face and hefted the small weight Ben occasionally placed on it—perhaps only now did Skip comprehend that there was no real danger in the climb, only the overwhelming seeming of it.

Soon we could see Ben, busy with the rock, but coming steadily. In a moment he was stepping in among the boulders.

"Gooooood mountain, old man. What a great mountain." Easing the rope from around his chest, for a moment Ben looked back down the slab into the basin now several hundred feet below us.

"You mean Mother came up that thing? Not bad, eh?"

He stood up, grinning all over, and a hundred and fifty miles of Sierra peaks stood up with him as though to receive a benediction. Blue and grey, yellow and maroon, ran the crest north and south, cockscombs and sharp peaks, ribbons of snow, butt-end glaciers, moraines, talus chutes, wide glaciated valleys running down to a scattering of timber, high lakes and white tumbling streams: forces moving to the sky and to the sea but too slowly for human reckoning. There were all the passes we'd come over, most of our campgrounds. Wild, wild—and so much more still to explore.

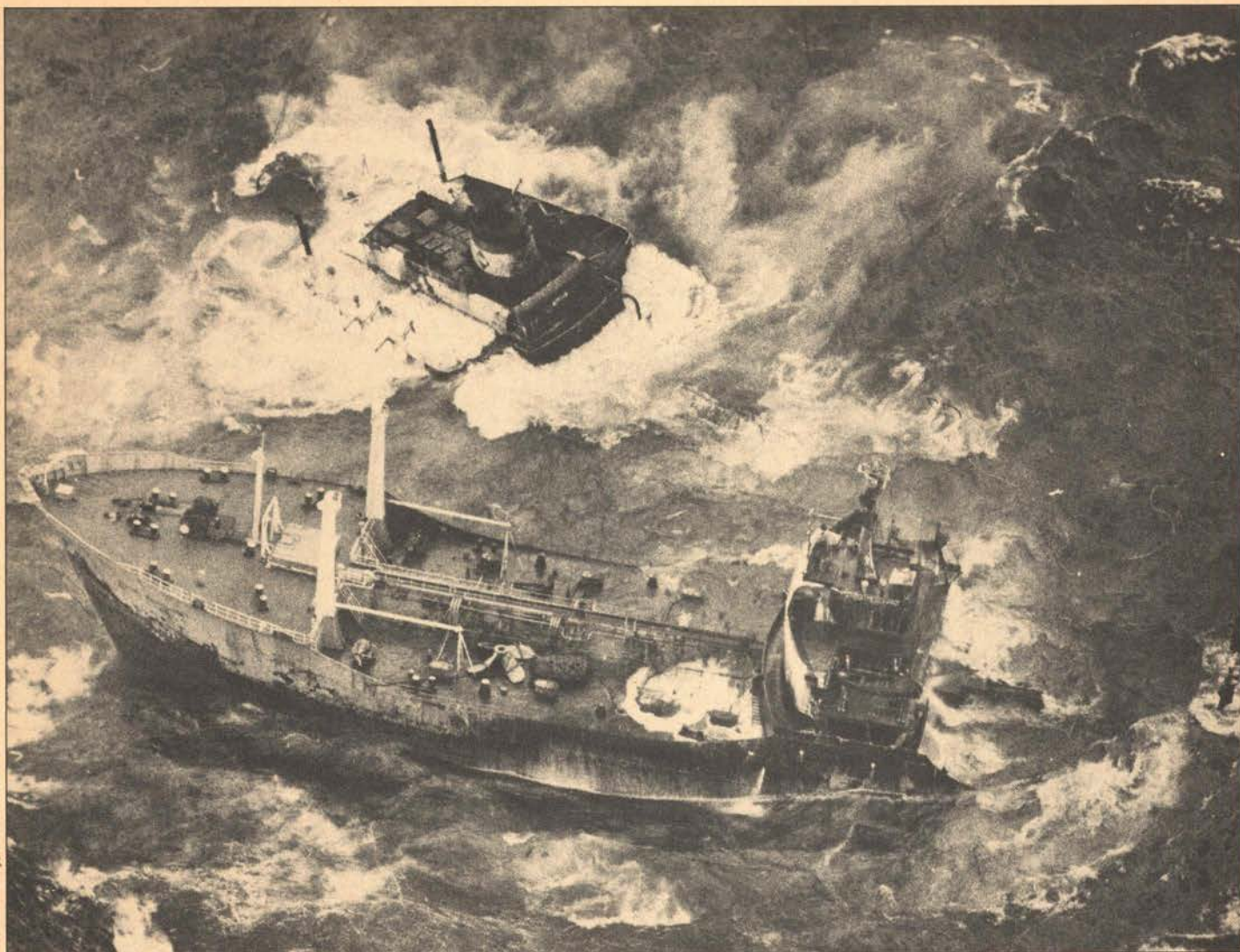
"God what a high place." We were at 14,000 feet.

Why was it we were up here instead of down on one of Skip's beaches? I do not know. Father is dead; in later years he climbed the sidewalks of Berkeley with a cane. And Joe, the piton nut, victim of lowland afflictions, confined to cars and backyards. And Elisabeth down there, domesticating some worn-out socks, probably, or fixing supper, thinking about her grandchildren.

What is it, so imperious, about the summons of the mountains which promises nothing but the time of your life? I do not know. Nor do I have to know.

The boys had gathered up the rope, eager to get to the top. They had yet to cross a kind of rock bridge that should have tumbled off the east face eons ago but which was still there. Chattering about coming up that scary crack, they skipped across the bridge, seeming to be unaware of the chasms of air below them. But I waited, letting the rope run through my fingers until they were across. It was no time to get careless.

SCB



The wreck of the Argo Merchant.

Doing Something About Oil Spills

PHILIP W. QUIGG

"All tankers, whether new or existing, which use U.S. ports should be held to strict standards of design, construction, operation, maintenance, surveillance and boarding." —Russell Train, EPA Administrator, January 1977.

"The day of the gunboat is over. We are going to get into a heck of a lot of trouble with the rest of the world if we unilaterally impose safety regulations." —William Coleman, Secretary of Transportation, January 1977.

These contradictory statements encapsulate the contending views that have caused United States policy regarding tanker standards to veer several times in recent years.

Philip W. Quigg, a free-lance writer, is a consultant on environmental issues.

When the International Convention for the Prevention of Pollution from Ships was being negotiated in 1973, the United States actively favored the right of coastal states to impose more stringent standards than those generally applying. But at the 1977 Law of the Sea Conference, the United States agreed to a compromise that permits coastal states to control dumping from ships, but leaves flag states responsible for setting standards for construction, equipment, maneuverability and manning of vessels. Now the Carter Administration, encouraged by a public outraged by our apparent inability to protect our shores, has shifted back to a tougher position. As environmentalists have been quick to point out, however, the Coast Guard is already empowered by Congress, by the Ports and Waterways Safety Act of 1972, to establish

and enforce standards that should have prevented such ill-equipped, ancient hulks as the *Argo Merchant* from entering our ports.

The President has spelled out an unambiguous program that should gratify environmentalists. It is a remarkable document which deserves much more attention than it has received. If its provisions are carried out, not only our shores but all the oceans will benefit from a new degree of protection from oil spills.

The new regulations for tankers entering United States waters require:

- Double bottoms on all new tankers to reduce, by more than half, the incidence of oil spills from grounded tankers
- Segregated ballast in all tankers to eliminate the discharge of oil with ballast water

• Inert gas systems which reduce the possibility of explosions such as that of the *Sansinena* in Los Angeles harbor last December

• Backup radar systems, including collision avoidance equipment, which not only warn the crew of danger at close quarters, but also plot the most expeditious way out

• Improved emergency steering standards, presumably calling for more extensive backup systems, and possibly greater maneuverability (though this is not spelled out).

Most encouragingly, these regulations will apply to all ships larger than 20,000 deadweight tons, rather than 70,000 and 100,000 tons as called for in earlier regulations and conventions. The radar provision will become mandatory in two years; the other provisions will be fully effective in five years. The President also called for an international conference late this year to seek adoption of these standards by other maritime countries.

Since the Intergovernmental Maritime Consultative Organization (IMCO) is now drafting a convention on crew standards and training, the President did not directly address this vital question, except to call for higher standards for United States crews. But he made it clear that if the 1978 IMCO convention falls short of what the United States believes is required, we will impose standards unilaterally.

This is a crucial issue. No matter how sophisticated shipboard equipment may be, accidents will continue to occur unless vessels have better crews. Possibly the biggest attraction (and most dangerous aspect) of flags of convenience is the low wages paid the crew—an average of \$120 per month for seamen from the developing countries, compared to \$700 for American seamen. Whatever the morality of the practice, this virtually ensures that crews will be poorly educated and generally badly trained. The practice of shifting officers and crews from ship to ship at frequent intervals means that even competent seamen often do not know how to operate the equipment on board. For example, the polyglot crew of the *Argo Merchant* could not understand one another; patently unqualified personnel were on the bridge when she went aground; and the skipper was so irresponsible that Liberia lifted his master's license.

President Carter also has ordered the Coast Guard to inspect foreign tankers at least once a year—more often if necessary—and to deny reentry to those that fail to meet safety and environmental-protection regulations. The flag-of-convenience nations often keep the names of tanker owners and major stockholders confidential, as

well as changes in the names of tankers. Under the new regulations, this anonymity will cease for ships in American waters. Records of ownership of tankers with histories of accidents, poor maintenance and pollution violations will be included in a Marine Safety Information System.

Of course, accident records are already kept, if not used. Marine experts have identified vessels with such abysmal his-



Oil-soaked bird.

Tom Myers

tories of groundings, collisions, fires, engine failures, etc.—the *Argo Merchant* was among them—that a disastrous end is virtually certain.

Even before the President's message, Congress was loaded down with bills covering these measures and many more. One highly favored bill provides for comprehensive liability and compensation for oil-pollution damages. Strict liability and adequate compensation clearly will not be achieved by international agreement in the foreseeable future. The International Convention on Civil Liability for Oil Pollution Damage, which came into force in June 1975, defines the nature and extent of liability, but sets a ludicrously low maximum of \$16.8 million for compensation and provides a large loophole by exempting Acts of God. Still, both Congress and the administration do appear prepared to establish a single national standard of liability for oil spills from whatever source (tankers, pipelines, offshore rigs) and to create, by means of an oil transfer tax, a \$200-million fund to pay cleanup costs and to compensate victims of oil pollution.

If these measures are adopted and enforced, and if progress is made in setting standards for manning and maneuverability, what then remains to be done to protect our seas from pollution from tankers? There are four principal issues that concern environmentalists.

First is the role of the Coast Guard, which has demonstrated either an incompetence or an unwillingness to carry out its responsibilities. This is inexcusable yet understandable. The Coast Guard has been assigned jobs for which it was not intended and is not qualified. The most recent example is the President's statement that he had "instructed the State Department *and the Coast Guard* to begin diplomatic efforts to improve the present international system of inspection and certification" (my italics). The Coast Guard already has too many responsibilities for drawing up regulations and for interpreting the will of Congress and the Executive than it can handle. Meanwhile, there is no decision-making mechanism to bring together all government agencies with responsibilities bearing on marine safety and the marine environment. If such a mechanism existed, perhaps the Coast Guard could return to its primary task of enforcement.

A second outstanding question is whether states can take action if they feel Washington is derelict or federal regulations are inadequate. This question is now before the United States Supreme Court, which has agreed to review a lower court decision that struck down a Washington State statute imposing strict controls on tankers in Puget Sound. The decision was handed down in a suit brought by Atlantic Richfield, who argued that "Balkanization of regulatory authority over this most interstate, even international, of transportation systems is foreclosed by the national policy embodied in the Ports and Waterways Safety Act." The state of Washington could respond with no less logic that regulations suitable for most ports are not adequate to meet the special conditions of Puget Sound, where a narrow channel, swift tides and fast-moving fogs make shipping highly vulnerable. A decision is expected late this year.

Third, some students of marine accidents believe that too much emphasis has been placed on regulations and on the shoddy practices of flag-of-convenience states. Surprisingly, it is not Liberia but Japan that holds the record for ship losses—eighty-nine in 1970. Flags of convenience fly over some of the most modern and best equipped tankers as well as some of the worst. Important as it is to tighten regulations, the real problem is that navigation itself has changed little since the days of sailing ships, while the vessels have changed enormously. There is too little technological backup to compensate for human failure, which is inevitable even among the best-trained crews. Simple measures, such as installing radar reflectors on all range markers and buoys, have been neglected, and the sophisticated Vessel Traffic Sys-

tem, used to help ships maneuver in close quarters, is developing too slowly. The importance of fail-safe measures is underscored by a finding of the National Academy of Sciences that human error is a major factor in more than eighty percent of marine accidents.

The Carter administration has not fully addressed this problem, although the Sec-

United States regulations up to 200 miles from our shores and to exclude ships that fail to meet our standards. There are sound reasons for such a "pollution zone." Oil spills need not occur close to shore—within a three or twelve-mile territorial limit—to have devastating consequences. It makes little sense to claim control over fisheries within 200 miles of our shores if the fish-

Since there is no united constituency for establishing a pollution control zone, as there was for fishing, Congress is likely to conclude that the proposal is indeed inconsistent with our traditional dedication to freedom of the seas.

An alternative to the pollution control zone has been suggested. The Coast Guard would request permission to board a



Children spreading straw to soak up oil.

retary of Transportation has said that Loran C, special equipment that allows a navigator to plot his position with great precision and reliability, will be required on all ships in American waters. The deployment of Loran C will, in turn, demand a large increase in compatible land-based installations.

Finally, the most difficult unsettled question concerns the right to intercept a foreign-flag tanker flying a foreign flag for boarding and inspection. The draft treaty now being debated in the fourth session of the Law of the Sea Conference prohibits enforcement of standards until a foreign vessel enters port. Environmentalists are determined that this be changed. At the very least, coastal states should have the right to intercept an incoming tanker at the twelve-mile limit.

But some environmentalists, including members of Congress, want more. A number of bills are being considered—notably one sponsored by Senator Kennedy—that would establish a pollution control zone co-extensive with the 200-mile "fishery conservation zone." In effect, the Coast Guard would be empowered to impose

eries can be destroyed by oil spills over which we have no control.

Environmentalists are, however, by no means unanimous that this legislation is desirable. The United States might lose more at the Law of the Sea Conference than it could gain from such unilateral action. Other countries would certainly retaliate; at the very least the United States effort to maintain freedom of research within the 200-mile economic zones of other nations would be doomed to failure. Assertion of a 200-mile pollution zone might well weaken international efforts to protect the marine environment. Since approximately ninety percent of all vessels within 200 miles of our shores are headed for or leaving United States ports, it can be argued that we already have the opportunity for adequate control.

In any case, the administration's proposals will be strenuously opposed. Anything that appears to restrict freedom of the seas—or gives other nations an excuse for doing so—is understandably repugnant to all the major maritime powers. Anything that could be interpreted as restraining international trade is equally to be avoided.

suspect vessel as far as 200 miles from shore; if the request were refused, the ship would then be denied permission to enter its port of destination. But this would probably not be any more acceptable to other nations than a pollution control zone.

The United States would do well to avoid pushing unilateral action too far. The State Department reports that the President's message to Congress brought no anguished cries from other maritime powers, and this is a favorable sign.

Finally, there is the critical question of what sort of treaty or agreement will emerge from the protracted United Nations Law of the Sea Conference, which held its sixth session this past summer. Under the draft document that existed when Mr. Carter took office, the Ports and Waterways Safety Act of 1972, as well as much of the President's program for increased marine safety and pollution prevention, would have been illegal. Strangely, the Law of the Sea delegates gathered in New York this summer seemed barely to have noticed the President's message to Congress or the various bills in Congress bearing on shipping and protection of the marine environ-



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ment. Perhaps it was because the delegates' attention—indeed their wrath—was focused on the bills authorizing American companies to commence deep-sea mining without waiting for international agreement.

Even though the recent session seemed preoccupied with the deep-sea mining issue, progress was made in other areas. According to Elliot Richardson, head of the United States delegation, the Law of the Sea convention, as now drafted, no longer conflicts with American law and regulation. This is partly a matter of interpretation. The so-called "Consolidated Negotiating Text" put together in late July does grant coastal states certain rights to protect their coastal waters, but does *not* permit them to impose higher than "generally accepted international standards" in their territorial seas. It may come to pass, as Noel Mostert and others have been saying for years, that what the United States determines to be necessary controls and regulations will become the international standards—thus obviating any possible

conflict between "generally accepted international standards" and United States regulations.

Speculations of international accord may be entirely academic, however, for the conference itself is in serious jeopardy. The United States and other industrial countries feel betrayed by changes in the consolidated text made after the conference had adjourned. The United States has reportedly threatened to withdraw from the conference unless its own *laissez-faire* attitude toward deep-sea mining prevails. This prospect alarms environmentalists for several reasons. First, many environmentalists feel that other issues are far more important than deep-sea mining. Second, no one would benefit from the United States' withdrawal from the conference. We already have agreement on several important issues, including the right to protect our shores from oil spills. Moreover, it would be foolish to abandon the arduous efforts of four years of frustrating negotiations. We stand to lose too much—the seas themselves.

SCB

You Think We're Joking?



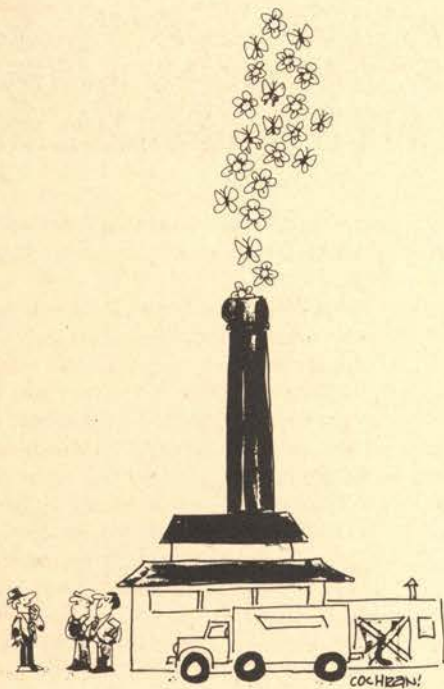
"Can you think of anything more depressing than knowing that some day all of this will be ours?"



"We don't need the planes. The bad air is getting him!"



"... I don't want to be a big frog in a small pond. . . all I want to be is a small frog in a clean pond. . ."



"Tell me about your new pollution control methods."



"Pollution! Pollution!"

The Pine Barrens

Continued from page 5

ca, or in the world for that matter, though some travelers, discounting botanical differences, perceive a striking visual similarity between The Pines and certain areas of spruce-dominated taiga in the Alaskan interior. Surely, no other forest in eastern North America contains such a wide range of overlap between northern and southern plant species. Within The Pines more than 100 southern species have established the limit of their northernmost range; some twenty northern species have staked out limits heading the other way. Also within The Pines are at least two plants—sand myrtle and the Pickering morning glory—that grow nowhere else. The curly grass fern, a curiosity extant in only two other locations outside The Pines (Long Island and Nova Scotia), was first discovered by science in 1805 on the banks of the Batsto River, at Quaker Bridge. And not far from Jenkins is a place called "the Plains." The Plains encompass 27,000 acres of dwarf pines and oaks which, over the millennia, acquired stunted height (two to five feet at maturity) through adaptation to the cyclical ground fire that periodically runs through the forest and, in so doing, enables the dwarf pines to reproduce.

Among the region's notable wildlife are the white-tail deer, the beaver, and the gray fox, though perhaps they are not quite so notable as the Pine Barrens tree frog, the carpenter frog, and the northern pine snake. Beyond The Pines, the range of these three are said to be highly restricted. There are not many fish, a couple of dozen species—the water is too acid. Butterflies abound, though: ninety-one species in the region, with wonderful names like the Pearly Eye, the Lakehurst Satyr, the Southern Wood Nymph, the Variegated Fritillary, the Hoary Elfin, and the Copper Bog.

Through and underneath it all runs the water: pure, hard, cooled by springs that bubble to the surface at a constant temperature of fifty-four degrees Fahrenheit, clear after rain but at other times a rich reddish-brown from the leaching of bog-iron deposits and from tannin in the bark and roots of the riverbottom cedars. The color of the water is deceptive. One is reminded of root beer. Yet according to a study by the Interior Department's Bureau of Outdoor Recreation, the quality of The Pines' water approaches that of "uncontaminated rain water or melted glacier ice." Even more impressive is the quantity of it—an estimated 17.7 trillion gallons stored in a shallow aquifer known to geologists as the Cohansey Formation. To comprehend such a quantity of water, one must try to imagine a lake covering 2,000 square miles

and 37 feet deep—a lake the size of Connecticut. The Cohansey is a valuable aquifer, and it prevails. It is also vulnerable. The overlying mantle of loose sandy soil that serves as a sponge to the rain is likewise capable of soaking up urban wastes. Which is another splendid reason why Richport has no business sneaking up on Retreat.

The Pines has been a retreat of one kind or another for more than 200 years. The area was not attractive to the earliest settlers. The forest did not beckon hospitably to homestead farming. So the region was left largely to a handful of charcoal colliers and others with reason to cherish the scant density of their peers. Over the early years, such types included fugitive Tories, Hessian deserters from His Majesty's Service, pirates and privateers, smugglers, highwaymen, rascals and thieves, not to mention a sizable contingent of Quakers who, for one reason or another, had failed to live up to the rigid codes of conduct expected of Quakers elsewhere.

Blueberries and bog iron

Life in The Pines in Colonial times was not always as bucolic as some would have liked. Iron works appeared at Atsion and Batsto. Bog iron, mined in The Pines and forged over pine-oak charcoal, provided cannon and shot for General Washington's army. Jersey bog iron was resistant to rust. It would command much of the ferrous market in this country until the 1850s, when Allegheny ore became the favored raw material, and coal replaced charcoal under the nation's forges. Later and at various places in The Pines, sand and gravel were quarried and glass manufacturing enjoyed a certain vogue. But, by and large, after the iron works played out, the region's principal products were and are agricultural—mainly blueberries (in production of which, thanks to The Pines, New Jersey ranks first nationally), and cranberries (New Jersey ranks third).

Aside from these endeavors, the region's only other significant commercial enterprise over the years has been a wanton merchandising of land. For more than a century hucksters have painted The Pines as a veritable residential Eden, garnishing their sales pitch with such come-hither communities—existing on paper only—as Fruitland and Prosperity Park and Paisley. In his classic profile of the region, John McPhee describes how some prospective buyers were hoodwinked by promoters who "tied pears and apples to the limbs of pine trees and stationed fishermen in boats . . . with dead pickerel on the ends of their lines and instructions to pull the fish out of the water every ten minutes."

Meanwhile, the state of New Jersey in its wisdom proceeded to acquire vast tracts in The Pines; the Wharton Tract, for example,

covers 96,000 acres and is managed as a state forest. Lesser state holdings comprise an additional 65,000 acres. And in the north, the federal government presides over substantial pineland acreage at the Fort Dix Military Reservation, McGuire Air Force Base and the Lakehurst Naval Air Station. Altogether, about one-quarter of the region is now in public ownership (if one is willing to stretch the imagination to embrace Defense Department lands as public). As for the rest of The Pines, they are still up for grabs.

Possibly the most ruthless grab ever proposed for The Pines was the 1964 scheme to bulldoze fifty square miles near Jenkins into a super jetport, with ancillary "new" cities housing a quarter-million people. Fortunately this plan found few friends within the Federal Aviation Administration or among the proprietors of New York City's existing airports and, after much public fuss, was ignominiously scrapped. No doubt historians will note a curious similarity between The Pines Jetport and The Everglades Jetport, which was laid to rest in Florida some four or five years later. In any event, there was a time in the 1960s when this singular threat to The Pines seemed quite real and imminent—so imminent, in fact, that environmentalists began to clamor for some measure of permanent protection for the place. But everyone's measure was not quite the same. Some friends of The Pines demanded national park designation. Others espoused monument status. By 1972, says one veteran of the preservation wars, "the Pine Barrens had been studied and rejected for just about everything the Park Service has to offer short of a national battlefield park. Considering all the sound and fury, maybe a battlefield park for the Barrens isn't such a bad idea."

No doubt the most realistic solution at present is Representative James J. Florio's effort to create a Pine Barrens National Ecological Reserve. Toward this end, the *Camden Democrat* last April introduced a measure without precedent—a bill that would establish a cooperative federal-state mechanism to protect and manage 970,000 pineland acres. Hearings are expected to be held soon by the House Subcommittee on National Parks and Insular Affairs.

Florio's measure is rooted in the "Greenline Parks" concept, an approach to preserving recreational landscapes first espoused in 1975 by Charles E. Little, environmental policy specialist for the Congressional Research Service of The Library of Congress (and coauthor of the 1973 Sierra Club Landform book, *A town is saved, not more by the righteous men in it than by the woods and swamps that surround it*). As Little defined them, green-

line parks would help avoid overextending the resources of the National Park Service, would preserve significant natural areas through access agreements and land-use controls as well as by acquisition, and would place the federal government in the role of provider of front money and technical assistance to state commissions that would manage the "parks." The concept, Little noted, is "akin to national park practice in England and Wales," and, but for the lack of federal participation, is somewhat similar to the approach adopted in New York State's management of its Adirondack Park.

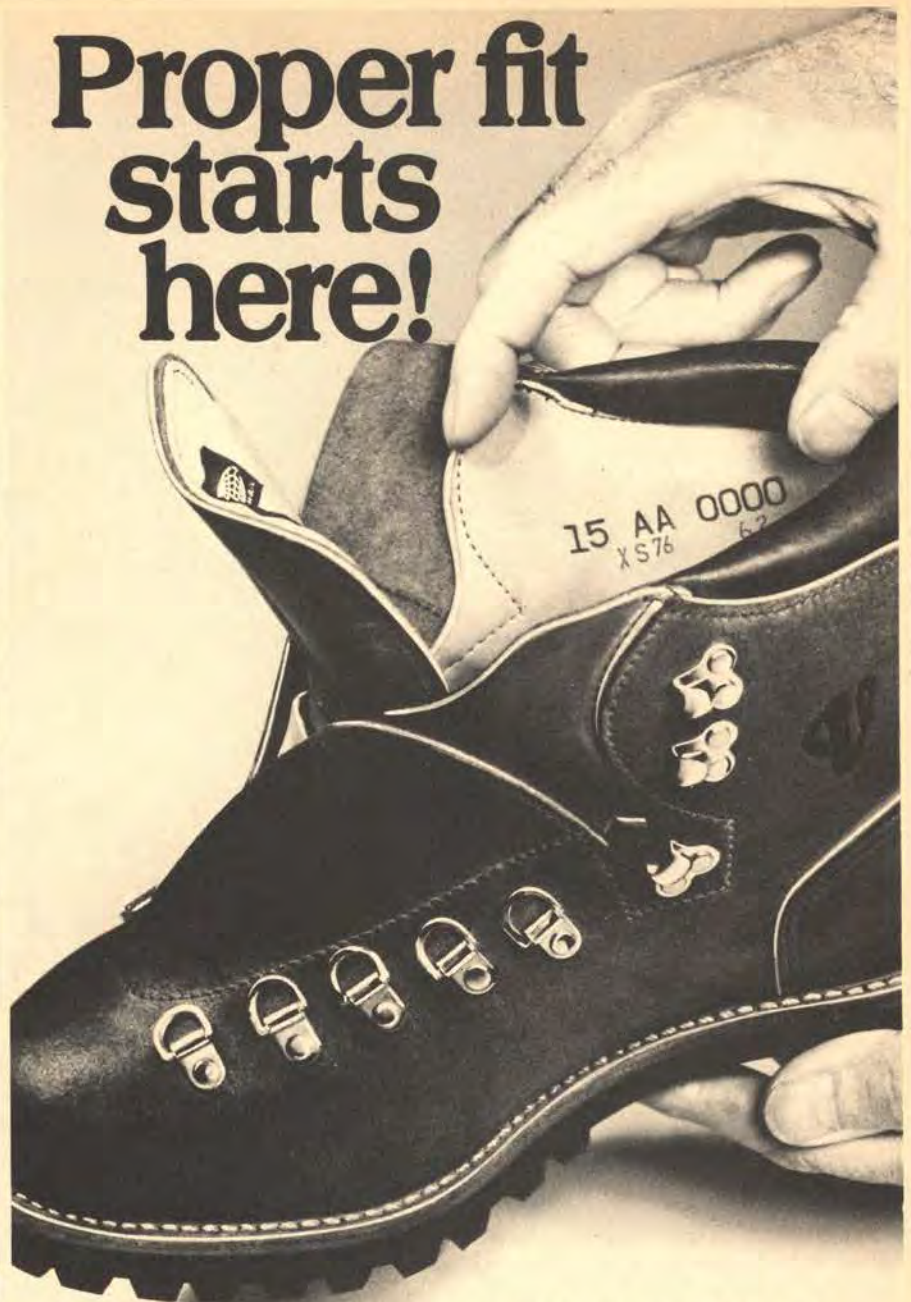
Specifically, the Florio bill would authorize expenditures of \$50.5 million to establish the ecological reserve—\$500,000 in planning grants to a management commission (to be appointed by the governor of New Jersey); \$25 million for direct acquisition of up to 50,000 acres of critical land in The Pines, including the pygmy forest, with authorization for the Secretary of the Interior to transfer these lands to the state commission upon approval of its management plan; and \$25 million in management grants to the state. Under the bill, the latter grants could be used to compensate landowners for access rights and to provide payments in lieu of taxes to local governments where acquisition of land would result in a loss of revenue.

Not surprisingly, the proposed ecological preserve enjoys wide support from the New Jersey congressional delegation as well as from local, regional and national environmental organizations. Two such organizations, in fact, have already launched their own effort to protect critical pineland areas: the North Jersey Conservation Foundation and The Nature Conservancy are engaged in a joint fund-raising drive to finance acquisition of some 20,000 acres.

Sentiments in The Pines regarding the bill are mixed, as they always are in home-rule backwoods places. Some residents of the region view the Florio plan as a federal "takeover." In Jenkins and thereabouts, a few people regard it as a thinly disguised scheme to steal the aquifer's water and pump it upstate to the burgeoning North Jersey suburbs. A substantial number of residents, however, agree with Mayor Floyd West of Bass River. "Something has to be done to protect The Pines," says West. "Development is out of control. Each municipality plans its affairs as if the ones next-door did not exist. And the outside interests, the absentee landlords from New York and Philadelphia, are taking advantage of that." West claims he represents a pinelands majority in supporting the concept of an ecological reserve. "I'm not a conservationist," he says. "I just happen to believe in common sense."

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Your Letters Will Save Redwoods

For background on the Redwood Park expansion, see Sierra Club Bulletin, May 1977, pages 26, 27; April 1977, pages 10-11, 32.

Steven Lau

Congressman Phillip Burton's (D-California) bill to expand Redwood National Park is sailing rapidly through the House of Representatives after a painfully careful and prolonged subcommittee mark-up. It cleared the House Interior Committee in near-record time and successfully avoided weakening amendments. It should reach the floor of the House just as this article reaches your Representative to urge support of H.R. 3813, Burton's bill. Representative Burton also deserves our praise for his strong leadership in championing the park expansion.

In the Senate, Alan Cranston (D-California) took the lead early in August by introducing the Carter Administration's bill despite intense pressure from the timber industry and its employees. Senator Cranston will continue to be subjected to heavy lobbying efforts, and he will need your support and thanks in this difficult fight. Because the October 9 recess of Congress draws close, the Senate must act immediately to get the legislation to the President's desk. This is a key concern that should be mentioned in letters to your senators.

Letters to your Representative should stress some of the following points:

- We strongly support the Burton bill (H.R. 3813)—the minimal legislation needed to protect the park. The area to be acquired for preservation has already been reduced by one third, from 77,000 acres to 48,000. One crucial area, Devil's Creek, with a high concentration of old-growth redwoods and unstable stream banks, lies on the southern edge of the 48,000-acre boundary proposal. If the acreage is reduced further, Devil's Creek would not survive.

- The bits and pieces of redwood remnants already protected in the state parks are no substitute for the national park we have the chance to build with H.R. 3813 and S. 1976. We need to take action now to build a proper park for the future. These measures will not only help reduce and control erosion throughout the Redwood Creek basin, they will also create jobs in the area. The Secretary of the Interior must also have the power to impose land-use regulations upstream from the expanded park.

- A comprehensive jobs program is very important. The economic situation must be improved if we really want to save the area. Environmentalists have worked hard to see that a jobs program is included in this legislation; we resent untrue charges by the logging companies that we want to sacrifice the loggers to the trees.

Letters to senators should stress support for the Cranston/ Administration bill, S. 1976. The Senate bill does not yet have a jobs program and is getting a late start. It is important to stress that we need a bill *this year*.

Steven Lau lobbies in Washington, D.C. for the Sierra Club on Redwood Park issues. Previously, he was Friends of the Earth's national park task force coordinator for the Six Rivers Branch.

The Wawona Grove, in Redwood National Park.

California: The Golden Trout— Wilderness Fight '77

Mary Ann Eriksen

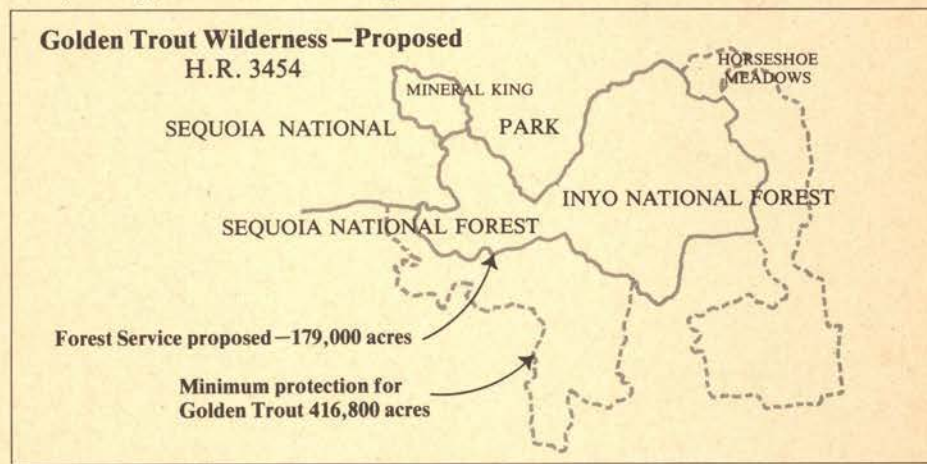
Every year, the timber industry and environmentalists wrangle about wilderness. Last year, the two signally important areas in question were the Alpine Lakes Wilderness and Kaiser Lakes Wilderness. This year, Redwood Park has been hotly contended. And so has the proposed Golden Trout Wilderness Area, so called because it is the last of the original Golden Trout habitat (and home of the threatened Little Kern Golden Trout), in the southern Sierra Nevada, just south of Mineral King.

Like so many disputes over wilderness, almost everyone agrees in principle but disagrees on numbers. There is widespread agreement that this area must be preserved—but how much of it? Proposals have been numerous, varied, and frankly confusing. The Sierra Club had originally proposed boundaries including 330,000 acres (by Forest Service calculations). This acreage was reflected in the Endangered Ameri-

Mary Ann Eriksen is the Club's Southern California Representative.

can Wilderness Act (H.R. 3454 in the House, S. 1180 in the Senate) cosponsored by California Senator Alan Cranston. But the Department of Agriculture added two adjoining roadless areas to the proposal, boosting the total acreage to 416,800 acres. Then, finally, the Office of Management

down," he said in a letter to members of the Interior Committee, "hundreds of jobs would be directly or indirectly lost, and valuable timber and recreation land would be removed from productive use." The Forest Service concluded differently: "For Tulare County as a whole," the Forest



and Budget stepped in and reduced the area to 179,000 acres.

Timber industry pressure has been strong to keep the Golden Trout Wilderness as small as possible. The industry's rhetoric is, by now, familiar. The local congressman, William Ketchum, made the usual charges about locking up the wilderness: "Entire timber operations would be shut

Service avowed, "the economic impact, regardless of the alternative, will be minimal. . . ."

Your letters can help in the struggle to protect the Golden Trout Wilderness area. There will probably be an intense floor fight in the middle of September. Please let your own Representative know which side you are on. **SCB**

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Washington, D.C.: An Unfair Lobbying Law

Rhea Cohen

Last year, during the Ninety-fourth Congress, we were barely spared the consequences of a strict and overbearing lobbying disclosure act. In the first flush of post-Watergate reform, lobbying disclosure legislation seemed a good idea: government-in-the-sunshine, an open and accountable Congress. But in practice, the legislation would hamper public-interest lobbying by requiring groups to file extensive reports describing their lobbying activities, including indirect lobbying—the “ripple effect” of asking others to lobby. In addition, groups such as the Sierra Club would be required to maintain records of and to report all contributors along with the amounts they donated. Some versions of the bill would require reports from non-paid volunteers as well as paid staff, and some versions would even cover contacts with executive-branch agency officials as well as legislators.

Big business and trade association lobbying organizations would not be seriously

Rhea Cohen is a Sierra Club Washington representative.

hampered by such legislation—they can afford the extra clerical and financial burdens. But most public-interest lobbying organizations would be crippled by the added red tape.

The 1976 legislation sank in a morass of congressional conflict, when the glaring discrepancies between the Senate and House versions could not be reconciled before Congress adjourned for the presidential election. Unfortunately, the legislation is back, and Congress is again debating lobbying disclosure legislation. The new bill, H.R. 5795, sponsored by Representative Tom Railsback (R-Illinois), contains the same burdensome provisions that the previous bills featured. Oddly enough, Common Cause, a public-interest lobbying organization, is industriously, if mistakenly, supporting the bill. The Sierra Club, along with the American Civil Liberties Union, the National Wildlife Federation and the National Health Council, Inc., has organized opposition to this legislation. We feel the bill is not only discriminatory but also probably unconstitutional, since it discourages the exercise of First Amendment freedoms of speech, assembly, petition and association.

If strict legislation is passed, the Sierra Club and other organizations like it will have to centralize their operations in order to keep close track of the diverse activities and efforts of far-flung chapters and groups. Imagine the bureaucracy and red tape! Operating costs would soar. To absorb these expenses, groups will have to either curtail lobbying or raise membership fees. Neither prospect pleases.

The courts have consistently rejected attempts to regulate free speech—including the advocacy of ideas. The Supreme Court held (in *NAACP v. Button*, 371 U.S. 415, 1963) that “First Amendment freedoms need breathing space to survive,” and cautioned that “government may regulate in the area only with narrow specificity.” The Supreme Court has also stated that the government may regulate First Amendment rights only when there is a “compelling interest,” that is, when the state’s interest in such regulation is more compelling than the freedoms to be limited. This is clearly not the case.

On a more basic level, the legislation—though well intentioned—misses the point. The ACLU recently concluded that “past [lobbying] abuses demonstrate that gifts by lobbyists and not the advocacy of ideas is at the root of the problem.” The current Korean scandals are timely examples of what lobbying abuses consist of. But instead of attempting to control this influence peddling, Common Cause has concentrated on the legitimate lobbying of public-interest organizations. We feel that this is the wrong approach.

The right approach is to require members of Congress to report the gifts made to them, their staffs and families. This is proposed by H.R. 5578, the bill public interest groups *do* support. This bill would be less burdensome than Railsback’s (and Common Cause’s) legislation, especially to those non-profit organizations that must report their lobbying activities to the Internal Revenue Service (IRS). Such groups would comply with the reporting requirements of H.R. 5578 by filing the same financial information given to the IRS. Furthermore, neither executive branch communications or contributors’ names are reportable under H.R. 5578, and coverage thresholds (how much a group may spend before it must be reported) are high enough to exempt small local groups.

It is no longer a question of whether or not there will be lobbying reform, but how that reform will be imposed. Lobbying disclosure legislation should aim at preventing affluent organizations from “buying” votes and favorable decisions. But it must not restrict the free flow of ideas. **SCB**



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Midwest: Good News for the Indiana Dunes



The Indiana Dunes National Lakeshore.

Jonathan Ela

Spring and summer of 1977 brought us good news—and maybe some bad news. The good news: on July 18, the West Beach unit of the Indiana Dunes National Lakeshore finally opened. The lakeshore, bordering Lake Michigan just east of Gary, was authorized in 1966, but money troubles and acquisition problems kept it at the promise stage for more than a decade. Even after West Beach was finally acquired, little happened; the Park Service's plans for the area stirred up a controversy. The Park Service proposals had indulged in massive recreational overkill—several enormous bathhouses, many parking lots, and a few absurdly inappropriate facilities, such as a waterfront swimming pool. Conservationists argued that it was not a good idea to destroy the natural features of the area in order to build recreational facilities that would be better located in a city.

Ultimately, conservationists won, and on the rainy Monday of its opening, West Beach's facilities were appropriately modest: a large parking lot (in an area that had been sand-mined years before) and a handsome bathhouse that blends into the sandy landscape. The rest of the beach has been left untouched.

The Indiana Dunes have not been entire-

Jonathan Ela is a Sierra Club Midwest Representative and author of an upcoming Sierra Club book on the Great Lakes.

ly rescued, however. A utility wants to build a nuclear power plant nearby. Several key parcels have not yet been authorized for inclusion into the lakeshore. Still, the opening of the beach project was a nice tangible step toward making this spectacular shoreline accessible to the public.

Now the bad news. Last spring, United States Steel Corporation announced plans to build one of the world's largest steel mills on a company-owned plot of land straddling the Ohio-Pennsylvania border on the shore of Lake Erie, near Conneaut, Ohio. The site was originally purchased by Andrew Carnegie around the turn of the century. It's not spectacular land—2,800 acres of second-growth forest and meadows and beach. It's downright dull compared to the Indiana Dunes or other areas around the Great Lakes. But there it is, a large stretch of undeveloped land on the shore of Lake Erie. Should it be used for a multibillion-dollar industrial complex, or should it be reserved as open space for the public?

The U.S. Steel proposal itself raises some important questions. The company has been remarkably silent about plans for the plant and its relation to other related industrial facilities. One question is whether the world steel market can absorb the vastly increased production that the new plant promises. The company, many people feel, would quickly close down facilities in Youngstown and other regional steel-making centers. The social consequences

are easy to imagine: whole communities thrown out of work.

The company prefers to deal with "greenfield" facilities—undeveloped sites where a steel plant can be designed and built without having to fit in with existing buildings. But should a corporation abandon communities that depend on it simply because it is cheaper to start from scratch elsewhere?

How can one judge a community's ability to absorb a new industrial facility? Conneaut now has a population of about 25,000; U.S. Steel's plan could easily quadruple that population in a very short time. Conneaut residents are beginning to question whether a region of small cities, farms and vineyards is the proper location for a steel mill.

Even leaving these questions aside, the issue of a protected Great Lakes shoreline remains. Theoretically, both Ohio and Pennsylvania have Coastal Zone Management programs to govern the allocation of the fixed mileage of shoreline: to date, there has been no indication that either state's CZM program is having the slightest influence on U.S. Steel's plans. Indeed, the state of Ohio has set up an "information office" in Conneaut that appears to be openly peddling the steel mill proposal.

Most residents of the Upper Midwest would agree that the Great Lakes shorelines are our most precious natural and recreational resource: it is time to make a stand.

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News

At Last! A Stripmine Law

The White House Rose Garden was crowded; there were Appalachian farmers, environmentalists from the Midwest, ranchers from Montana and even a few Club activists. They had come to see President Carter sign into law the Surface Mining Control and Reclamation Act of 1976. The date: August 3, 1977, some thirty-seven years after stripmine legislation was first proposed.

The mood was one of relief—the long fight was finally over. Praise was clearly in order: the President praised Louise Dunlap, of the Environmental Policy Center, for her tireless lobbying. Senator Henry Jackson (D-Washington) praised Lee Metcalf (D-Montana), the bill's Senate champion, and everyone praised Morris Udall (D-Arizona), the chief House sponsor of the new law.

The new stripmine law is a moderate measure, requiring that

- prime agricultural land that is stripmined must be restored by the coal operator to its original productivity;

- owners of private land on which the federal government owns the coal must give written consent before mining can start;

- coal operators must return stripmined sites to their approximate original contours;

- fees collected from stripmine operators will be used to set up a fund to pay for reclaiming abandoned stripmined lands;

- regulations dealing with "mountain top mining"—the practice of decapitating mountains to get at buried coal—will become stricter;

- public hearings and notices will be required throughout the permit process.

But, of course, the law is not perfect. It does not ban stripmining in alluvial valley floors. Small coal operators are exempted from regulation until January, 1979, enough time for three separate stripmines to be completed. And, finally, stripmining will be permitted in all western National Forests, except the Custer National Forest in Montana.



A happy lobbyist. Louise Dunlap, of the Environmental Policy Center, is congratulated by President Carter. Her lobbying efforts of years paid off; the stripmining bill was finally signed.

"Scaled Down" Mineral King Ski Resort Proposed

Will Mineral King get a smaller ski resort? Assistant Agriculture Secretary Rupert Cutler recently proposed a "compromise" version of the Mineral King ski resort. Cutler met with Disney Corporation officials, who are pushing for a big ski resort, but no commitments or decisions were made at the meeting. A Disney spokesman, Jim Stewart, said a scaled-down development could be economically feasible. A smaller resort would include nine ski lifts (instead of the eighteen proposed) and could handle 8,000 skiers at a time. The resort would

start out with 800 hotel beds, but 1,000 more would eventually be added—along with another ten ski lifts.

Representative John Krebs (D-California), author of H.R. 1771, which would add Mineral King to Sequoia National Park, promised to investigate Cutler's proposal, but he doubted that any economically feasible plan could also be environmentally sound. He urged the Administration to hurry its proposal, since he was vigorously pushing his bill. According to a Krebs aide, hearings on Mineral King have been promised this year by Representative Phillip Burton (D-California), Chairman of the House Subcommittee on National Parks & Insular Affairs.

Wide World Photos

Carter Backs Off Water Project Cuts

President Carter has half-lost his fight to cut money for unneeded dams. Faced with strong congressional opposition to the cuts, the President signed an appropriations bill that funds nine of the eighteen on the original "hit list" (the Auburn Dam's funding depends on results of seismic studies). Carter agreed to restore the dam funds if the Clinch River Breeder appropriations were cut. Yet had Carter wanted to, he could have rejected the projects despite congressional opposition, for the two-thirds majority needed to override a veto was lacking. To environmentalists, the President's compromise is hard to swallow.

"This agreement between the President and the congressional leaders is not a 'compromise,'" reacted Brock Evans, director of the Club's Washington office, "it's a betrayal. . . . We

relied on his promise that he would veto any appropriations which had any projects on his hit list on it—but the President caved in." Many Club members had worked to see the projects killed, testifying against them at hearings held across the country.

The following projects will be funded:

Applegate Lake, Oregon
Atchafalaya River, Louisiana
Cache Basin, Arkansas
Columbia Dam, Tennessee
Hillsdale Lake, Kansas
Richard B. Russell Dam, Georgia
Tallahala Creek, Mississippi
Bayou Bodcau, Louisiana

Readers may wish to contact the President, expressing their concerns that long term reforms be implemented. Write the White House, Washington D.C., 20500.

Senate-House Conference on Clean Air Act Reaches Agreement

After three years of intense legislative activity, members of a conference committee finally reached an agreement on a comprehensive set of amendments to the 1970 Clean Air Act. The extension of the auto emission abatement schedule contained in the amendments is needed immediately by the automobile industry in order to remove a legal barrier to marketing 1978 model autos.

Although the bill delays enforcement of some requirements of the act and weakens other requirements, it also contains important improvements in the protection of clean air areas; in the sanctions that EPA can impose against noncomplying polluters; and in requiring the use of "best available control technologies" for new sources of the dirtiest categories of pollution.

Particular credit for courageous leadership on this issue is due to Senators Edmund Muskie (D-Maine), Gary Hart (D-Colorado), Robert Stafford (R-Vermont), and John Culver (D-Iowa), and to Representatives Paul Rogers (D-Florida), John Moss (D-California), Henry Waxman (D-California), and Andrew Maguire (D-New Jersey).

Energy Conservation Legislation

The House completed floor action in August on the energy conservation legislation requested by President Carter. The House adopted amendments to strengthen the utility residential conservation program and to fund energy audits for local government buildings. It rejected a five-cent gasoline tax increase. Meanwhile, the Senate Committee on Energy and Natural Resources is nearing completion of the non-tax aspects of the Senate version of the National Energy Act.

Department of Energy Created

A Department of Energy has been created and James Schlesinger confirmed as its chief. Environmentalists are divided on the idea of a single energy department. Some fear the centralization of authority implicit in such an agency, while others feel that greater efficiency and less duplication of efforts will be the result.

Early indications of Energy Department policy are not encouraging. In a pre-confirmation press conference, Schlesinger called for speeding up nuclear plant licensing and predicted the construction of as many as 300 nuclear power plants.

Water Pollution

On August 4, the Senate passed a bill to amend the 1972 Clean Water Act. The Clean Water Campaign coalition charged that the set of amendments weakens the Act unnecessarily in several important areas, including industrial clean-up standards, wetlands protection and the method of financing sewage treatment facilities. Of special concern was the change that would allow states to administer portions of the Section 404 permit program which regulates dredging and fill operations in streams and wetlands. Environmentalists opposed this delegation of authority because states might be too susceptible to pressure by developers and might not enforce the program effectively. However, a Senate floor amendment by Senators Lloyd Bentsen (D-Texas) and George McGovern (D-South Dakota) that would have weakened the wetlands protection provision even further was narrowly defeated, 45 to 51.

The final step of reconciling the significant differences between this bill and the still weaker one passed by the House last April remains to be accomplished.

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Losing Ground, Environmental Stress and World Food Prospects, by Erik P. Eckholm; W.W. Norton & Company, New York, 1976. Cloth, \$8.95.

This book, by one of the Worldwatch Institute's leading writers, is far more than the usual gloom-and-doom recital of dismal prospects.

We tend to think of our environmental problems as the environmental problems: Overconsumption of petroleum, overindustrialization, all the varied and depressing symptoms of wasting too much. It comes as a surprise to learn that the real energy crisis involves firewood, not gasoline, and that trees, not crude oil, are our most important endangered resource.

Eckholm's main thesis is that a well-forested planet represents a crucial value to human life. Woodlands serve a primary function in the earth's ecosystems. They play an important role in modifying wind, temperature, humidity, and soil, as well as in recycling water, oxygen, carbon and nitrogen. They also provide the principal cooking and heating fuel in Africa, Asia and Latin America. Eckholm painfully notes that the importance of trees to the world food supply was never mentioned in the resolutions passed by the Rome World Food Conference of 1974.

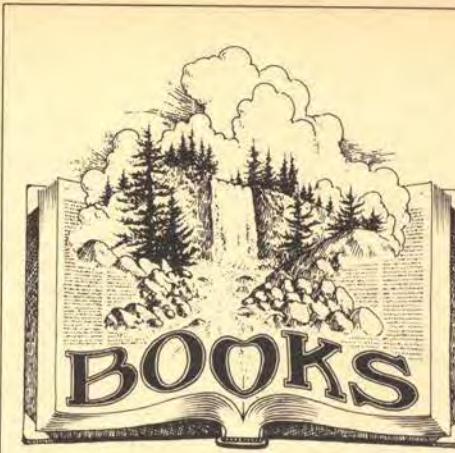
More kerosene

Contrary to the conventional wisdom of the seventies, Eckholm argues that the world environment will be better protected by keeping crude oil prices down to promote consumption of kerosene, the alternative to tree cutting among the poor, than by raising prices to reduce petroleum consumption. When cheap fuel is absent, land is not merely deforested but denuded of all burnable vegetation, including the straw and weeds needed to fertilize and condition the soil.

So far only the industrial nations, with easy access to fuel, have learned the lessons of deforestation, flooding and famine well enough to promote adequate reforestation, however mismanaged.

Whole ranges of mountains that have been stripped of cover are losing their topsoil to adjacent lowlands in the Himalayas, in Java, in Ethiopia and the Andean countries. Inhabitants of the lowlands, forty percent of the world's population, escape resultant flooding by migration to the cities. In these dehumanizing, ungovernable urban agglomerations, birth rates climb as hopeless adults seek survival and security by having many children.

The tropical plains, too, are losing their forests. Eckholm is not encouraging about efforts to colonize the Amazon basin, where most of the soils are poor and best



The Real Energy Crisis

Ellen Winchester

sited for growing trees. Settlers from the Andean highlands find their plots useless within five years. Yet enormous tracts have been granted to Brazilian and American firms for lumbering and grazing enterprises that may cause irreversible losses of fertility and may have unknown effects on climate and river flows.

Theoretical methods exist for sustainable, continuous cropping of tropical soils, but the testing and development of adequate technology and the education of farmers are still in the future. "Clearing the Amazon forests of Brazil," says the author, "... may emanate from many possible rationales, but food production is not one of them."

How much increasing desertification is caused by changes in climate independent of man's manipulation of his environment is still uncertain, but there is reason to believe that overgrazing and wood gathering have increased the spread of deserts and created the climate to maintain them. For example, dust blown high into the atmosphere from dry lands can reduce local rainfall. In North Africa alone, more than a hundred thousand hectares of land are lost to the desert each year. Once a granary for the Roman Empire, it is now a chronic, major food importing region, with a population that has multiplied six-fold since the beginning of the century.

Unfortunately, African nomads want to build large herds as insurance against drought, and the farmers feel they must plant submarginal lands for the same reason. Their war for survival operates against the ecosystem's longer-range needs. The solution, Eckholm says, "will have to be a system in which livestock is valued for quality and economic value rather than

simple numbers, in which farmers have the knowledge and equipment to grow enough food on the best suited lands without running down the lands' fertility, and in which families see an advantage to remaining small."

Spare that tree

Not everything is wrong in North Africa. In Niger, huge regional management schemes, in which clan leaders regulate grazing and migratory movements according to natural conditions and the advice of range specialists, may show other desert nations the way to improved land use. Algeria plans to plant a sixteen-kilometer-wide forest barrier against the desert across the width of the country. Unless it succeeds in involving local communities in planning and planting, however, the young trees are apt to be grazed or cut for firewood, as has happened to other reforestation projects, even in China.

Technology is in sight for the dirt-cheap solar cooker that would spare trees everywhere, but it is not yet easily available. In some regions, such as Nepal, the increased use of hydroelectric power may relieve the need for wood in cities, but Eckholm believes the electrification of isolated mountain villages may never be possible. Similarly, it follows that the simple energy needs of the world's poorest third cannot be met by nuclear power plants.

Despite his emphasis on the importance of forests, Eckholm voices concern about the constellation of problems posed by agriculture. Fertile lowlands are devoted to high-energy low-labor intensive agriculture, displacing subsistence farmers. Wells are sunk in arid regions without concern for increased herd sizes and overgrazing on the desert fringe. Within a few years of their construction, reservoirs are filled with silt behind dams built without regard for suicidal tree cutting by hill country farmers. Already, with a population increase of three billion expected by the year 2000, half a billion humans are seriously malnourished.

Irrigation, long supposed to be a key factor in the green revolution, is in deep trouble. Salinization and waterlogging are destroying irrigated lands in Peru, in Pakistan, in every country of the Middle East, along the Nile, and on the delta of the Colorado River. The problem arises because adequate drainage is as necessary as water for effective irrigation. Salts collect in the water table, and as the latter rises within a few feet of the surface, capillary action pulls it the rest of the way, where it dries and leaves a thin film of salt. Lowered water tables in areas that depend on deep wells are another limit to the spread of irrigation.

Until recently, hope endured that grow-

ing populations could turn to protein from the sea. World fishing fleets expanded rapidly to fill the rising demand for human, poultry and animal food, including pet food. The result was a marked decline in fish catches. Cod harvests in the North-eastern Atlantic decreased fifty percent in 1973, while the herring catch showed a similar decline, and haddock was down to a tenth of its long harvests by 1965. Even if the United Nation's prediction of a properly managed sustainable yield of 100 million tons per year turns out to be correct, that limit would be reached in seven years at present rates of increase.

Official optimism

The National Academy of Sciences is optimistic about the prospects for eliminating famine. The Academy's National Research Council has concluded, after a two-year study, that chronic malnutrition and famine could be eliminated entirely within one generation—if industrialized nations plunged into intensive research on agriculture in poor countries. The study wisely specified that new methods of improving crop yields should not depend on increased use of fertilizers or on irrigation. Crash research programs will not, of course, solve all the problems. The study panel explicitly recognized that eliminating hunger also depends on reducing poverty, stabilizing food supplies through reserve systems, and slowing population growth. Panel Chairman Harrison Brown, of the California Institute of Technology, stated that without redistributing wealth, even doubling food production in poor countries will not prevent hunger.

Eckholm believes the seemingly fatal correspondence between the world's growing population, diminishing energy supplies and environmental deterioration can be broken by a new emphasis on agricultural rather than industrial development and by land reform. Making agricultural education and credit services more widely available and involving village people in planning the use of appropriate technology on their home ground will lead to better lives, smaller families—and reforestation. It is a test, perhaps the final test, of human ingenuity in organizing to make the best of things on a broad scale, to adapt to our environment, to substitute long-range gains for short-term satisfactions, and to survive. Erik Eckholm's *Losing Ground* is a well written, well organized guide to preserving the remaining terrain. SCB



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Knowing the Club

Since this column's debut in the September, 1974 *Sierra Club Bulletin*, it has picked up more than 120,000 new readers. In those three years, that many new people joined the Sierra Club. Unfortunately the net gain in membership has been substantially less—34,000—owing to dropouts and deaths. Nonetheless, probably half of the present 178,000 members are quite new to the Club and are unfamiliar with many of its operations and parts of its somewhat complicated structure.

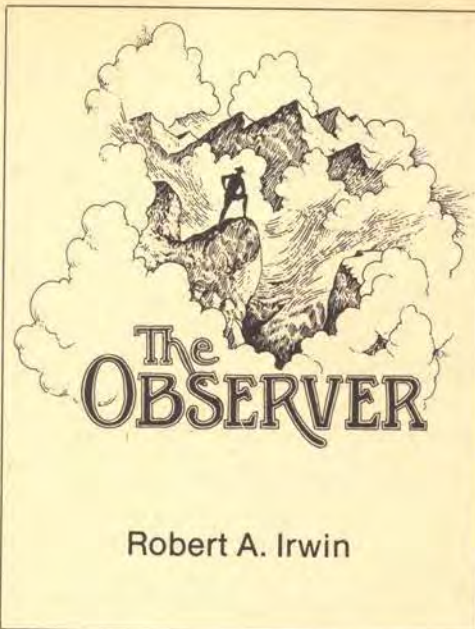
Herewith, then, is our own Guide for the Perplexed.

The Club's structural groundwork was laid in 1892, when the Club was founded. The by-laws provided for an elected nine-member board of directors (raised to fifteen members in 1922) to manage the Club. At its annual organizational meeting in May, each new board elects a president, vice president, secretary, treasurer and a fifth officer. These five make up the board's executive committee, which is empowered to take emergency action between the regular meetings of the full board.

The president chairs the meetings, approves candidates for all national club committees, and oversees the volunteer activities of the Club. The board and its officers remain the essential building block and controlling mechanism of the Sierra Club's framework and operations.

Who does the work and who calls the shots? The answer was the same in 1892 as it is in 1977: you the individual member. The Club has always relied primarily on its volunteers to testify at hearings, plan and lead outings, write letters and make the Club's views known to lawmakers and public officials, to get out newsletters, to study wilderness areas, raise money, and on and on. It was not until 1952—after membership had passed 7,000 and the first non-California chapter (Atlantic) had been formed in 1950—that the Sierra Club had a full-time executive director, when it hired David Brower. Today, to serve its 176,000 members, the Club's full-time paid staff totals 108. (The separate Sierra Club Foundation has twelve full-time employees.) That figures out to one full-time Club staffer to every 1,620 members.

The staff reports to the executive director, Michael McCloskey, who in turn reports to the Club president and takes direction from the board of directors. Thus ultimately, the Club member sets Club policy by determining via the ballot who will sit on the board. More directly, Club members contribute to and help shape Club programs and policies by taking an active role in group or chapter affairs.



Robert A. Irwin

Club members are encouraged to speak their minds at group or chapter executive committee meetings, in newsletters, or in appearances before the board of directors.

Essentially, the Sierra Club depends on the initiative of its members. It is not—as many of our adversaries contend—a well-disciplined, tightly run organization, a “green Mafia.” Instead, it is a diverse group of individualists bound together by a love of wild places and the natural environment. As the Club's membership has expanded from a few hundred people clustered around San Francisco Bay to a figure fast approaching 200,000 scattered across the continent, its conservation concerns have likewise stretched from the Sierra Nevada to all corners of the globe, even into outer space.

Chapters and Groups

Both geographically and functionally the Sierra Club's structure is loose and its operations decentralized. The process began in 1905 when the by-laws were amended to allow for chapters, the first of which was chartered in 1911 as the Southern California (now Angeles) Chapter. There are currently fifty chapters, which contain a total of 250 groups. All chapters and groups operate under basically uniform by-laws. They generally run their own affairs and set their own policy on local matters (it must be consistent with national policy), but cannot levy dues. Instead, chapters receive allocations from the annual Club dues. They are free, however, to raise money in certain other ways, and most do.

Most of a chapter or group's work is done by volunteers serving on such committees as outings, conservation, member-

ship and publications. Some of the larger chapters have offices and full- or part-time employees. At times certain groups may dominate activity in a chapter. This is especially true in some of the relatively new chapters whose groups had been vigorous and active long before those chapters were organized. An example is the Governor Pinchot Group of the Pennsylvania Chapter. For years it had been part of the Atlantic Chapter, which once stretched from Maine to Florida. When the Pennsylvania Chapter was formed in 1972, that group and others in the state were already going concerns. Thus the chapter has become a loose federation of five groups that work together on statewide issues. Usually, however, chapters play a central role in their territories, with their groups—most often formed after the chapter—serving as chapter subsidiaries and taking care of local problems. In addition, many of the large chapters have set up special “sections” based on activities such as mountaineering, whitewater canoeing, or skiing, or sections organized for special age groups, which may have such names as Sierra Singles or Young Sierrans.

Chapters themselves are units of two other Club bodies: the regional conservation committees (RCCs) and the Sierra Club Council. Each chapter sends two delegates to its respective RCC (see map for boundaries) and one delegate to the council. (The Hawaii and Alaska chapters, being regions in their own right, do not belong to an RCC.) The chairmen of the ten RCCs are appointed by the board of directors and also serve as regional vice-presidents, representing and speaking for the Club in their regions.

The continent-wide system of ten RCCs was completed in late 1968 in order to:

- Relieve the board of dealing with strictly regional environmental issues;
- Advise the board on those issues and make recommendations on national issues within their territories; and
- Provide communication, consultation, and common action on conservation matters among chapters within a region.

Besides the official voting delegates, many other individual members participate in RCC work. They serve on one or more of the RCC committees, subcommittees, and special task forces. RCCs hold several full meetings a year.

The Council and National Committees

After the board itself, the Sierra Club Council is the most visible part of the Club's volunteer structure. It was founded by the board in 1956 to bring the growing number of chapters (then eleven) and major national committees (then ten) into the Club's policy-making process and to pro-



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The Staff

Helping to coordinate the efforts of all Club members is the professional staff. In addition to Executive Director McCloskey, there are seventy-two full-time and seventeen part-time staff people in the San Francisco office. The Washington, D.C., office under its director, Brock Evans, has eleven full-timers, five of whom lobby. A similar office in California's capital, Sacramento, is headed by lobbyist John Zierold, with one assistant plus an energy and a coastal/land use coordinator. That office is funded largely by the twelve California chapters. Another sixteen full-time and two part-time people staff eight other field offices, and two other persons serve as wilderness coordinators. All of these people in the field—thirty full-time and two part-time—come under the Conservation Department. Thus out of the Club's full-time force of 108, a total of forty-one are in the Conservation Department plus nine part-timers. Other operations departments are Sierra Club Books with a staff of nine, the *Sierra Club Bulletin* with four full-time and one part-time, and Outings with a staff of seven. The other major departments, all with support functions, include the following (with staff sizes in parentheses): Accounting (fifteen), Member Records, formerly Member Services, (eleven plus two part-time), Office Services (four plus four part-time), and the Development Office (four), a new department combining fund-raising and membership recruiting and servicing.

The Conservation Department: A Closer Look

Because conservation has always been the chief concern of the Sierra Club and because a very considerable portion of the Club's staff is directly engaged in it, a closer look at that department will provide



members with an understanding of its work and of its strengths and limitations. Generally its work can be broken down into the performance of three broad functions:

- **Communications.** The department must maintain a continuing flow of information to and from field representatives, Club leaders, conservation and other national committees, task forces, chapters and groups, individual members, and the general public. It publishes several periodicals, the most useful being the *National News Report* (NNR), which comes out weekly while Congress is in session.

- **Research and Support.** The department maintains files, does research, drafts reports and makes recommendations to the board of directors to assist it in arriving at informed decisions on Club policies and programs. The department also works with other club entities, helping them with data for reports—most of which, of course, eventually find their way to the board.

- **Major Campaigns.** The department is responsible for coordinating the Club's campaigns to achieve the objectives set by the board. It marshals the Club's "troops" and resources, putting out alerts and mailings, activating phone chains and letter writers, seeing that hearings are covered and legislators are contacted, holding press conferences—all the necessary tasks to make sure that the Sierra Club's point of view is heard fairly and clearly.

While the conservation department wants to provide data, services, and counsel to individuals, chapters and groups, it has only limited resources and people. The department's staff must focus primarily on the national and higher priority regional issues and on the job of managing the national campaigns and seeing them through. Thus, when help on some local or regional environmental problem is needed often the best people to contact are people close to the scene—someone in your own group, chapter, or Regional Conservation Committee. If such efforts fail, contact the department's information services at Club headquarters. They will attempt to steer you to the appropriate Club expert—a person who may turn out to be, not a staff member, but a volunteer. **SCB**

Erratum

David Y. Allen was omitted as an author of the June/July/August issue's northeast report, "Gateway-The Promise and Problems of National Urban Recreation Areas." We regret this error and apologize to Mr. Allen, who chairs the Northeast Regional Conservation Committee's Gateway Committee. **The Editor**

Guest Opinion

From time to time in this space we present "Guest Opinions"—messages from prominent individuals who are not primarily involved on a daily basis with environmental concerns, but whose voices should be heard by those of us who are. Their viewpoints on various conservation issues, while inherently interesting and important to us, do not necessarily reflect or represent Sierra Club policy.
The Editor

On Nuclear Wastes: The Unanswered Question

Leo J. Ryan

Representative Ryan (D-California) is chairman of the Government Operations Subcommittee on the Environment. He has held hearings on nuclear waste before his committee. Mr. Ryan's 1976 League of Conservation Voters rating was a high eighty-six percent.

While the Administration mulls this nation's energy future, and Congress begins to sift through alternatives, many eyes have turned to the nuclear genie, out of his bottle thirty-two years.

Following World War II, when the Atomic Energy Commission (AEC) was established, the promise of reactor-generated power looked bright.

"This is a great national asset here," President Kennedy said in 1963, opening a nuclear facility. "And from the work we begin today, I hope the light will spread out, not merely to those who are served by electricity, but to all the world. . . ."

That was fourteen years ago. President Kennedy and others of that period saw nuclear power as plentiful and inexpensive.

Now, however, we must face previously unreported costs of billions of dollars to dispose of millions of gallons of toxic waste.

Since the first reactor began operation in the 1940s, waste by-products that are intensely dangerous have accumulated. Fission reactors, whether designed for production of weapons-grade plutonium or solely for the commercial generation of electrical power, produce wastes of deadly toxicity.

The plutonium wastes in "spent" fuel will remain dangerous for as long as 250,000 years.

What is truly frightening about this situation is that we currently do not know how we will ultimately dispose of these materials. The millions of gallons of such materials currently in inventories in this country are merely being "maintained" unprocessed in their present state.

Robert W. Fri, acting Administrator of the Energy Research and Development Administration, successor to the AEC,

recently gave an estimate of the staggering costs of maintaining this material.

Fri told Congress that the ERDA budget for the next fiscal year will include \$290 million just to maintain existing military wastes in storage at Hanford, Washington, and Savannah River, South Carolina, and to come up with some kind of plan for the future.

The key word here is maintain; no money had been budgeted for ultimate disposal because no one knows from practical experience what this means—or what the cost will be. In fact, the figure is open-ended. There is no upper limit, and the final amount could easily make this the most expensive project ever undertaken by any civilization in history. By way of contrast, ERDA's budget for the past fiscal year allocated only \$245 million for solar energy, including research and development costs.

If there are no hard figures on the costs of nuclear waste disposal, there are some indicators worth mentioning.

At West Valley, New York, a commercial nuclear waste disposal and reprocessing facility began operation in 1966 and suspended operations in 1972. In 1976, the operator of the plant, Getty Oil Company, decided that the continued operation of the plant was commercially impractical and informed the state of New York that under contracts drawn up in the early 1960's, the state had ultimate responsibility for the wastes.

In six years of operation, the reprocessing facility "temporarily" stored some 600,000 gallons of liquid wastes of high radioactivity and two million cubic feet of materials of lower radioactivity.

The state of New York, obviously hesitant to take on the task of storing this material forever, turned to the federal government for help.

The cost for disposing of the wastes? Estimates ranged as high as \$600 million for the 600,000 gallons—or about \$1,000 per gallon, according to expert testimony in subcommittee hearings.

Considering that there are approximately

74 million gallons of liquid waste currently in temporary storage in the nation, the same estimate would place the total cost of ultimate disposal of existing inventories at a staggering \$74 billion—if we had the technology to complete such disposal.

At present, there are some 170 commercial nuclear power plants either under construction or planned in the United States. To date, there has been very little consideration given to the problem of disposing of the wastes produced by those plants.

Clearly, our nation's choice of energy futures is a matter of grave concern. Reliance on nuclear power, once a bright possibility, is probably now a poor choice, for it threatens to be the most costly and the most environmentally dangerous course we could take.

The real challenge is to shift our emphasis away from nuclear power before we have saddled future generations with a permanent cost they must pay before they buy bread for hungry people. SCB

Meanwhile, in California

Last year, in the throes of a fierce debate over nuclear safety, the California legislature passed two bills that forbid the construction of new nuclear plants until methods for storing high-level radioactive wastes have been federally approved. After six months of hearings, the California Energy Commission has released an overview report of unresolved health, safety, environmental and economic problems associated with the nuclear fuel cycle. The report was not encouraging for utilities planning to build new plants. It identifies a number of areas where agencies have overlapping authority, where inadequate coordination has bred confusion, and where important programs have suffered significant delay. Energy Commissioner Gene Varanini termed the entire federal waste-storage effort "a disaster area." Unless the legislature amends current laws, California utilities will necessarily turn to conservation and alternative technologies to meet forecasted electrical needs.

President Jimmy Carter
The White House
1600 Pennsylvania Ave.
Washington, D.C. 20500

Dear Mr. President:

The purpose of this letter is to call your attention to the urgent need for Presidential action to speed the development of methods for safely disposing of radioactive waste. Because of the gravity of the situation, we ask that you consider establishing a Special Commission on Radioactive Wastes to directly address and resolve this issue on a priority basis.

As you are no doubt aware, the radioactive waste situation is totally unsatisfactory in terms of both high-level liquid and low-level solid waste. High-level liquid wastes are sitting in tanks at Savannah River, Hanford and West Valley. More than ten percent of these tanks have already leaked. All will eventually leak. Short-term bandaid methods, such as drying the waste materials to a salt cake within the tanks, have been practiced at Savannah River and Hanford to ensure that the tanks do not continue to leak. However, to our knowledge, ERDA does not have a plan for removing this salt cake from the tanks, converting it to a nonsoluble solid and disposing of it by deep burial. There are no plans for decommissioning these tanks. While radioactive wastes have been gen-



erated in this country for more than thirty years, no acceptable methods or demonstration facilities have yet been developed for managing this material.

At West Valley, New York, the situation is more critical, since the area's population density is greater, and 500,000 gallons of high-level wastes sit in a tank in a vault dug into the water table. The tank could not withstand the maximum earthquake that could occur on the site. The tank has a useful life of forty years, though the wastes will remain highly toxic for hundreds of thousands of years. Were the wastes at West Valley to leak into the local watershed, a major health and safety problem would ensue. This liquid waste must

therefore be solidified and moved to a federal repository before a major disaster occurs. We are frankly concerned about the bureaucratic inertia of ERDA and NRC in dealing with this problem. We believe a Special Commission on Radioactive Wastes, focused on the waste problem and freed of agency encumbrances, could attract the talent and expertise necessary to find new and creative solutions to this dilemma.

The situation regarding low-level solid wastes is similarly unsatisfactory. Some of this "low-level" material is, in fact, highly radioactive, consisting of used fuel elements and the most radioactive components of reprocessing and other fuel-cycle facilities. These wastes, buried in shallow trenches, contain large amounts of plutonium and other transuranics. The commercial burial grounds at West Valley, New York and Maxey Flats, Kentucky, are leaking.

By any objective standards, nuclear waste practices have been a failure. We therefore call on you to establish a Special Commission on Radioactive Wastes to resolve the problem. We believe that further licensing of nuclear reactors should be halted until an acceptable resolution to this problem can be found.

Marvin Resnikoff
Chair, Nuclear Subcommittee
Energy Policy Committee

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ALASKA

The Last Great First Chance



The Arrigech Peaks area in the proposed Gates of the Arctic National Park.

EDGAR WAYBURN

This article is excerpted from testimony Dr. Wayburn delivered before the House Subcommittee on General Oversight and Alaska Lands on April 22, 1977.

I love Alaska. In my work for the Sierra Club as chairman of the Alaska Task Force, I have been to Alaska fourteen times since 1976—in summer and in winter. I have visited the towns, the cities and the villages. I have crisscrossed the state several

times by air and, as people do in Alaska, I have traveled in all kinds of aircraft, from jumbo jets to Super Cubs, and I have traveled by automobile, jeep, ferry and motorboat. I have also traveled by canoe and raft and kayak, and I have hiked and backpacked, as well. I have slept in hotels, in people's homes and on the ground. In all, I have spent a good year out of the last eleven exploring Alaska—and I wish I could have spent more—in trying to evalu-

ate the highest and best uses of this great land. In addition, I have spent innumerable hours and days talking to many Alaskans and to other people involved in making decisions about Alaska. I have also spent time writing about Alaska, and a lot of time just thinking about its future. If I were a young man, I would live there. But since I am not, I am doing all I can for the great land.

We believe that in Alaska there are

rare—indeed unmatched—opportunities for all the people of the United States. There is not only the superb scenic and wildlife resource with unequaled recreational potential. There is the chance for our country to make wise decisions—to combine good development with good conservation—and to do it right the first time.

In Alaska we have an unparalleled opportunity to learn from our past mistakes. We have been all too generous with many of our country's greatest treasures. We have given away California's coastal redwoods, the Big Thicket in Texas, Florida's Great Cypress Swamps—to name only a few. Now we are having to buy back that land and at enormous cost. In Alaska, we have a remarkable opportunity—we can set aside superb national lands for their highest and best use at no cost to the American people, to whom they now belong.

Congress has already dealt generously with the state of Alaska. In the Statehood Act of 1958, Congress granted the new state 104.2 million acres of land, and approximately 45 million acres of tidelands and coastal shelf lands passed into state ownership at the same time. Thus Alaska was granted a total of nearly 150,000,000 acres of land, an area 1.5 times the entire state of California, more land than was granted all the seventeen western states together.

Congress has also dealt fairly with the native peoples of Alaska, granting them some 43.7 million acres as private property to use as they choose—along with nearly one billion dollars in cash. Congress has also set aside key areas in Alaska to remain in federal ownership. Congress should reserve the remainder of the unappropriated public lands of Alaska for the highest and best use for *all* the American people.

Along with the other groups in the Alaska Coalition, the Sierra Club stands in full support of H.R. 39, introduced by Interior Committee Chairman Morris Udall and seventy-nine members in Congress.

H.R. 39 satisfies the mandate of Section 17 (d)(2) of the Alaska Native Claims Settlement Act. It seeks to protect cohesive units of Alaska's wilderness, preventing damage to watersheds and animal habitat within the areas identified. The bill proposes an extension to the south and west of the existing Arctic National Wildlife Range in northeastern Alaska in order to encompass the migratory routes of the Porcupine caribou herd, now the nation's largest. H.R. 39 would enlarge Mt. McKinley National Park on three sides in order to bring the entire massif of the mountain into the park, as well as to include the entire moose, wolf, caribou, and grizzly habitat on the north.

H.R. 39 fosters a comprehensive regional approach to the conservation of the land

and wildlife resources. For example, on the Aleutian Peninsula, three closely related proposals would protect spectacular reminders of volcanic activity, as well as lakes, rivers, hiking country and the considerable forage needed by the endangered brown bear, one of the world's largest carnivores. The proposals would extend Katmai National Monument and make it a national park; they would establish the Aniakchak Caldera National Monument and the Alaskan Peninsula National Wildlife Refuge. In northeastern Alaska, in addition to extending the Arctic National Wildlife Range to the south and west, the bill would establish the Yukon Flats National Wildlife Refuge, the Yukon-Charley National Preserve, and the Birch Creek National Wild River. This set of proposals would join an intact unit of the Arctic ecosystem with the sub-Arctic. Fauna endangered elsewhere in the Arctic by oil development and exploration would be protected here, as would the summer breeding grounds of millions of waterfowl that migrate annually to the wetlands of the Yukon Flats.

Complete ecosystems do not conform to national boundary lines. H.R. 39 offers innovative management opportunities in two international areas: an Arctic Wildlife Range including Canadian lands adjacent to the United States; and the Wrangell-Kluane International Park in the Wrangell, Chugach and St. Elias mountains.

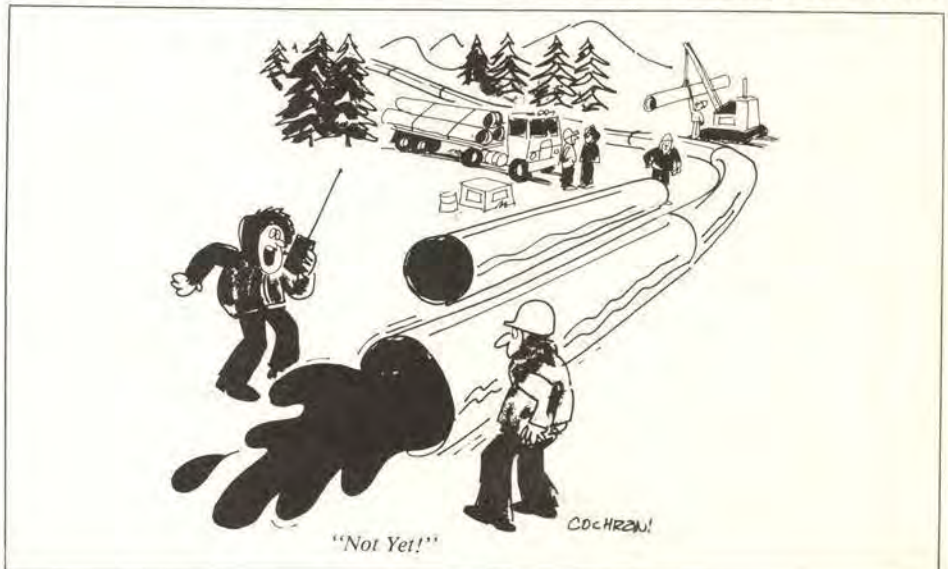
The Sierra Club believes that these lands of national significance should be permanently held in public ownership in the national conservation systems. For those lands not placed in the systems, we urge that they too be retained in federal ownership to assure protection of their wildlife and wilderness values, even though to a more limited extent.

H.R. 39 is based on the general principle that significant portions of the wildlands

of Alaska that are not in the public domain should remain in public ownership because of their "nationally significant natural, scenic, historic, geological, scientific, wilderness, cultural, recreational and wildlife values." Therefore, the policy goals include preservation of the wildlife, both the resident populations and the millions of wildfowl that migrate seasonally; protection of the habitat in Arctic and sub-Arctic ecosystems; preservation of historic and archaeological sites and cultural values of Native peoples; protection of the wilderness; and provisions for wilderness recreational opportunities.

A second, related principle behind H.R. 39 is that the national interest lands should be administered by the most appropriate agency. Public lands would be administered by the National Park Service and the Fish and Wildlife Service—the two agencies charged with the care of natural ecosystems. The National Park Service is charged with preserving land in its natural state and providing for human use and enjoyment of the land consistent with that preservation. The Fish and Wildlife Service is charged with protecting wildlife habitat in the National Refuge System. We believe these two agencies will best protect most of the federal lands in Alaska and perpetuate the vast wildlife populations they shelter.

A third national land-management agency, the Forest Service, administers federal lands for such uses as logging and mineral extraction. On land as fragile as the Alaskan tundra, these activities may so alter the landscape that it could take hundreds or thousands of years for it to return to its natural state. Examples of this kind of alteration are obvious along many rivers in Alaska, where miles of gravel dredged during and since gold-rush days still mar the landscape. We therefore



recommend a limited role for the Forest Service in the management of the fragile landscapes. Furthermore, we feel that no new legislation is needed to add certain areas of adjacent unreserved public land to the existing national forests.

We know that 115 million acres is a lot of land. We also know that the landscape is fragile and that, once destroyed, the cover will not regenerate for hundreds of years.

H.R. 39 designates 51 units, totaling 114.6 million acres of unreserved federal lands (from Alaska's total 375 million acres) to be added to the national conservation system as follows:

Units		Million Acres
14	NATIONAL PARKS	64.1
(3)	Parks—new units	(35.1)
(3)	Parks—additions	(8.1)
(5)	Monuments—new units	(8.3)
(3)	Preserves—units	(12.6)
	NATIONAL WILDLIFE REFUGES	46.4
(12)	New units	(31.7)
(2)	New units	(14.7)
	NATIONAL WILD AND SCENIC RIVERS	4.1
(20)	Wild Rivers	(3.6)
(3)	Scenic Rivers	(0.5)
51	TOTAL	114.6

The Ecosystem Approach to Alaska

National Interest Lands Conservation Act of 1977

A useful way to grasp the extent and significance of the national interest lands proposed in H.R. 39 (and to describe their proposed administration) is to picture Alaska divided into five major ecosystems:

1. The Arctic and sub-Arctic west of the pipeline



In northern and northwestern Alaska, above and below the Arctic Circle, H.R. 39 would protect the land and wildlife of the Arctic Coastal Plain and the Brooks Range between the Trans-Alaska Pipeline on the east and the Chukchi Sea on the west. Five of the six units in this region would be administered by the National Park Service with Fish and Wildlife Service cooperation; the sixth, the Selawik National Wildlife Range, would be managed by the Fish and Wildlife Service.

In the Brooks Range, a 13.6-million-acre Gates of the Arctic National Park would include some of the range's tallest pinnacles (the Arrigetch Peaks and Doonerak as well as Boreal and Frigid, the Gates themselves), the entire watershed of the Killik River, and habitat essential to Arctic wildlife such as caribou, grizzly bear, Dall sheep, moose, wolves, raptors and such fish as trout, pike and char.

The Brooks Range is relatively young. Its jagged granite peaks form a spectacular scenic backdrop to the gently sloping Arctic Coastal Plain to the north. The high mountain passes are used as migration routes by the Arctic caribou herd, once the largest with 240,000 animals, but drastically reduced by many pressures in the past six years to an estimated 50,000. Fish and Wildlife Service cooperation would be essential for the protection of the extensive wildlife population.

The Arctic Slope Native Corporation's proposal for a Nunamiut National Park is a possible alternative to the Gates of the Arctic Park. It would involve a larger area in which certain regions would be used by the Natives for subsistence and/or residency. Two other areas would be classified as wilderness; and the Natives themselves would play an integral part in the protection and management of the land and wildlife.

To the west of the proposed Gates of the Arctic National Park and joined on the south by the Kobuk Valley National Monument and the Selawik National Wildlife Range is the Noatak National Preserve. These three areas together total twelve million acres of the Arctic and sub-Arctic region. Here forest and tundra ecosystems meet and overlap. A Kobuk Valley National Monument would also set aside a unique area of Arctic sand dunes. Twenty-five square miles of changing, wind-formed dunes are surrounded by more than 300 square miles of stabilized dunes—an Arctic Sahara desert. In the Kobuk Valley, the Fish and Wildlife Service would coordinate management with the National Park Service in conjunction with its management of a Selawik National Wildlife Range to the south, thus forming a contiguous habitat for grizzly bear, wolves, wolverine, fox, migratory waterfowl, peregrine falcon and gyrfalcon, the rare snowy owl and,

Administrative Provisions

We support the following general administrative provisions of H.R. 39:

Wilderness—Most of the lands would be designated as wilderness and would become parts of the National Wilderness Preservation System. Additionally, 30.1 million acres of Alaskan lands already in national conservation systems would be included as components of the Wilderness Preservation System—5.2 million in three National Parks; ten National Wildlife Refuge Wildernesses totalling 19.5 million acres; and six units totalling 5.4 million acres in the Chugach and Tongass National Forests.

Wild & Scenic Rivers—The boundaries of Wild and Scenic Rivers will encompass an average of not less than two miles on either side of the river. They will be established by the Secretary of the Interior within three years. These areas are to be administered by the National Park Service.

Subsistence—On all lands covered by ANILCA, subsistence uses of the fish, wildlife and plant resources (gathering plants and wood, trapping, hunting, fishing, etc.) may be allowed. In areas where such uses are traditional, subsistence management zones may be established. Regulatory Subsistence Boards composed of subsistence users will review and approve applications for permits. The Secretary of the Interior may adopt regulations imposing limits, establishing seasons, etc. And he may curtail subsistence uses where necessary to protect the wildlife resources.

Sport Hunting—The Secretary may permit and regulate sport hunting on 12.9 million acres of National Preserves administered by the National Park Service. No sport hunting will be allowed in Parks or Monuments.

Alaska Native Selections—Certain lands withdrawn for Alaska Native selection fall within the boundaries established for National Interest Lands. Those that are selected by the Natives will be conveyed to them. Those that are not will become appropriate units of the national conservation system.

of course, the caribou that range through northwestern Alaska.

The calving and primary feeding grounds of the Arctic caribou herd are within Petroleum Reserve #4, twenty-three million acres on the northwestern Arctic Slope managed by the Interior Department. The Fish and Wildlife Service should have jurisdiction over the surface of the Pet 4 lands, which form a key portion of the habitat that will be protected by the national interest lands proposals in Arctic Alaska. Of special significance within Pet 4 are the Utukok calving area for the caribou herd and Teshepuk Lake, summer home for hundreds of thousands of migratory waterfowl.

Bordering on Kotzebue Sound of the Chukchi Sea are two areas of special scientific, social and cultural significance. A 4.5-million-acre Chukchi-Imuruk National Monument and a Cape Krusenstern National Monument of 900,000 acres is already being studied by archaeologists for traces of the Eurasians who first crossed the Bering land bridge and spread throughout North and South America as long as 40,000 years ago. Ancient lava flows and ice-rich



Peggy Wayburn

Mt. McKinley seen from Camp Denali.



Edgar Wayburn

Alaska cotton

soils have afforded rare protection to many mysteries of the past. Scientists are also monitoring sea levels, coastal currents, and other regional phenomena from these sites and need assurance that their long-range study will not be interrupted.

2. The Arctic interior ecosystem east of the pipeline



East of the Trans-Alaska Pipeline, an extraordinary opportunity remains for continued linkage of the ecosystems of the Arctic Coastal Plain, the eastern Brooks Range and the Yukon River, including the spruce forests characteristic of interior Alaska. The Arctic National Wildlife Range was established in 1960 and comprises nine million acres of *de facto* wilderness in the northeastern corner of Alaska. Adding 8.4 million acres of mountains and lowlands to the west and south would help protect the habitat of the 115,000 animals of the Porcupine caribou herd, which migrates over the range. With this expansion, the range would border on the



The Kobuk Sand Dunes in the proposed Kobuk Valley National Monument.

proposed 12.3-million-acre Yukon Flats National Wildlife Range in which tens of thousands of lakes, tarns, ponds and sloughs, more than 25,000 miles of streams, and uncounted acres of wet spruce bog provide summer nesting and feeding grounds for birds that migrate around the world. There is strong support in Canada for an Arctic International Wildlife Range, which could be established by setting aside five million acres across the Canadian border in the Yukon territory to complement the American reservation.

On the southern edge of this great land mass, a reservation of 3.2 million acres of scenic, recreational and historical importance is proposed in a Yukon-Charley National Preserve. To date, no portion of the fully navigable Yukon is protected in any federal reserve.

3. South-central Alaska



Another region of international interest recognized in H.R. 39 is south-central Alaska, with units to the east and south of Anchorage. National Park Service jurisdiction over 15.8 million acres in the Wrangell and Chugach mountain ranges could develop into cooperative management with Canada of a Wrangells-Kluane International Park. The Canadian government has already established a Kluane Game Sanctuary and National Park covering 18,630 square miles in the Canadian St. Elias Mountains. The Chugach, Wrangell and St. Elias mountains, with many peaks higher than 14,500 feet, are spectacular with their crowns of ice and snow. This corner of Alaska contains the most extensive glacier system in the United States, including the largest glacier on the continent, the Malaspina, and the longest, the Bering. The entire proposal encompasses the existing Glacier Bay National Monument and Brabazon Hills, both of superlative scenic quality. Hiking, camping, boating and fishing opportunities in the valleys and the coastal plain make this a recreational as well as "showcase" country.

About 120 miles south of Anchorage is the proposed Kenai Fjords National Monument, another richly diverse area. Its 600,000 acres stretch from the Harding Ice Field, over land carved by retreating glaciers and now softened by new forests, to the indented fjords that lead to the Gulf of Alaska. It is a geologically fascinating area, accessible from Alaska's largest city; and another area of interest for wildlife viewing: the boundary would extend three

miles offshore to protect the many marine mammals that swim in the fjords.

4. The Alaska Range and Alaska Peninsula



In the heart of the Alaska Range, north of Anchorage, reigns Mt. McKinley, at 20,320 feet the highest point on our continent. The aboriginal Alaskans called it Denali, meaning "The Great One." It stands in the middle of the massive Alaska Range and dwarfs the rugged peaks around it. Mt. McKinley National Park was established in 1917 to protect the massif and also the abundant wildlife of the area. But the two million acres of the original park do neither. Much of the southern flank of the mountain was not included in the Park, and the habitat of the wolves, moose, caribou and grizzly bear inhabiting the park is arbitrarily cut off on the north and west. An additional 4.7 million acres should be added on three sides of the park to correct these oversights.

There are five other proposals for national interest lands in the Alaska Range and the Alaska Peninsula, totaling 14.6 million acres. They encompass a rich lake and tundra, habitat for trumpeter swan, bald eagles, brown, black and grizzly bears, wolves, salmon and the Mulchatna caribou herd—which also roams Mt. McKinley National Park—and the proposed additions. This is fantastic country for river-running and hiking; the scenery is so spectacular and the potential recreational use of the land so varied that it is appropriate that three great national Park Service units are proposed in addition to Mt. McKinley National Park: Lake Clark National Park, additions to Katmai National Park, and Aniakchak Caldera National Monument.

Lake Clark is 100 miles west of Anchorage. It is fifty miles long and cradled in a valley beneath the brooding Alaska Range. The 7.5 million acres proposed for a Lake Clark National Park would include not only this beautiful lake, but also rolling tundra and many lakes to the west whose streams and rivers are spawning grounds

for red salmon and rainbow trout. Among these are rivers such as the Mulchatna and the Chilakadrotna, both of which offer wonderful float trips through wild country.

In the northeastern part of the Alaska Peninsula lies the existing three-million-acre Katmai National Monument, established in 1918. Six years earlier, Mt. Novarupta exploded with a flow of molten lava and ash that left behind it the fascinating and still-steaming Valley of Ten Thousand Smokes, around which the national monument was formed. In addition to the legacy left by this volcanic action, there are other qualities that make the area worthy of designation as a national park. The Katmai mountains are extraordinarily beautiful and often enhanced by a diaphanous veil of clouds in this misty, cool climate. The valleys provide important habitat for the osprey and the Alaskan brown bear. The Alagnak River is another excellent float stream. Expansion by 2.6 million acres and designation as a national park would be the best way to protect the habitats and watersheds of this area.

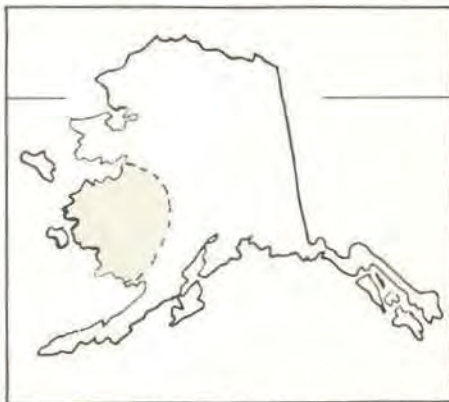
The proposed Aniakchak Caldera National Monument is an area of 400,000 acres midway down the Alaska Peninsula. The crater of this now-extinct volcano is huge—thirty square miles—and in its center is set the beautiful turquoise Surprise Lake. Moose and Alaskan brown bear live on the outer slopes of the caldera.

The Aniakchak Caldera National Monument would share a boundary with a proposed Alaska Peninsula Wildlife Range that would, of course, fall under the jurisdiction of the Fish and Wildlife Service. It is essential that additional range be provided, since the enormous range Alaskan animals require for forage will be severely cut by native land selections from the existing Kodiak National Wildlife Refuge on Kodiak Island, one of the most important wildlife areas of the entire state.

The last national interest land proposal near the Alaska Peninsula in H.R. 39 is the Iliamna National Wildlife Range. Lake Iliamna is the seventh-largest freshwater lake in the United States. Rivers within the 2.9-million-acre proposal are the key to the success of the salmon industry of Bristol Bay, since the red salmon population spawns there. The Kvichak is just one example of Alaska's commercially important rivers that also offer recreational opportunities. Yet the wildlife resources of the Lake Iliamna area are as important as the commercial and recreational values. Beluga whales migrate into the lake, which also supports the only freshwater colony of seals in the United States. The lake is heavily used by migrating birds like black brant and a share of the world's entire population of Emperor geese, which gather in the Bristol Bay region in October. Because of these many different interests to be preserved in the proposed wildlife range, we hope that cooperative management can

be arranged between federal, state and other agencies.

5. Western Alaska



In western Alaska, the 13.8 million acres proposed for the Wildlife Refuge System would protect land in the Yukon-Kuskokwim river deltas that is a crossroads for migratory waterfowl and shorebirds—and much more. The Togiak National Wildlife Range would span 3.5 million acres from the coastal ecosystem of Kuskokwim Bay to the tops of 5,000-foot mountains. It is a sanctuary for migrating birds, for the endangered peregrine falcon, and also for an amazing diversity of mammals. The low mountains are soft and green with tundra during the moist summers. Within them are nestled hundreds of little lakes, from which flow such superb wild rivers as the Kanektok and the Togiak.

A coastline habitat of more than three million migrating waterfowl could be preserved in the 6.3-million-acre Yukon Delta Wildlife Range. This lowland forest and tundra region is the second most productive habitat on the continent for migratory waterfowl. The Yupik Eskimos who live off this gentle land have formed a group known as Nunam Kitlutsisti ("protector of the land") to further goals similar to those of H.R. 39 for the delta area.

Scattered along the Yukon and Koyukuk rivers between the delta and the Yukon flats area are three units totaling 3.7 million acres, proposed as the Koyukuk National Wildlife Range. This entire region of wetlands serves as habitat for many ducks, geese, and other migrating species, as well as for mammals (wolverine, lynx, grizzly bear, marten) and fish.

Marine birds and mammals and migrating waterfowl that rest on the rocky islands, cliffs, and coast of western Alaska would be protected in a Coastal National Wildlife Refuge of approximately 300,000 acres. Fragments of the refuge are scattered along 1,500 miles of the coast, from Cape Lisburne in the Chukchi Sea to the Gulf of Alaska. The land and waters together support seventeen species of whales (seven of which are endangered). Among the twenty-eight species of birds that live there are the peregrine falcon and the gyrfalcon. Like all of western Alaska, these western-

most outcroppings are wildlife areas of extraordinary importance and richness.

In addition to the proposed additions to the National Park System and the National Wildlife Refuge System, H.R. 39 calls for 4.07 million acres of Alaska to be set aside as part of the National Wild and Scenic Rivers System. This acreage is needed for protection of some of the most beautiful and unspoiled rivers in the world. Some of the rivers designated are already included in the units discussed, but all should be given recognition and special protection under the appropriate agency of the Department of the Interior. Most are wild rivers and afford the visitor a wilderness experience as well as excellent river-running. Others are in more settled areas, but still qualify as highly scenic and exciting float rivers. The Wild and Scenic Rivers System forms an important part of the national-interest-lands proposals for Alaska in H.R. 39.

Finally, the key to preserving and managing these millions of acres well is respect for their ecosystems—and for the wildlife that live there.

SCB

[A sixth area, Southeast Alaska, contains the largest national forest in the United States. This particular area deserves more coverage than space here has permitted and thus an upcoming issue will devote a separate article to Southeast Alaska. —Editor]

Update

A House committee chaired by John Seiberling (D-Ohio) has been holding field hearings on H.R. 39 around the nation since April. Environmentalists have been delighted with the turnout and the response; a large majority of the 1,000-plus who testified spoke in favor of the bill. Even the hearings held in Alaska were not as anti-conservationist as pessimists had feared.

The next important date is September 15: On that day, Interior Secretary Cecil Andrus will present the Interior Department's proposals and recommendations for Alaska National Interest Lands.

Congressman Seiberling has been both energetic and thorough in setting up and presiding over hearings and briefings. His committee, the House Interior Subcommittee on General Oversight and Alaska Lands, will begin markup of the Alaska bill this fall, and Seiberling himself is pushing hard to get the Alaska bill to the floor by the end of the first congressional session.

The Senate version of the Alaska bill is S. 1500, introduced by Senator Lee Metcalf (D-Montana). It is supported by the Club and by the Alaska Coalition—a group of environmental organizations banded together to lobby for protection of Alaska's lands and resources. Please write your senators urging them to support S. 1500.

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cooling. Appendixes provide all the specific data you need to determine the practicality of solar heating for your home, as well as lists of books and other sources of additional advice and information. Exactly the same thorough, easy-to-follow approach is used in discussing electricity generating, solid waste disposal, growing food on little or no land at all, and more.

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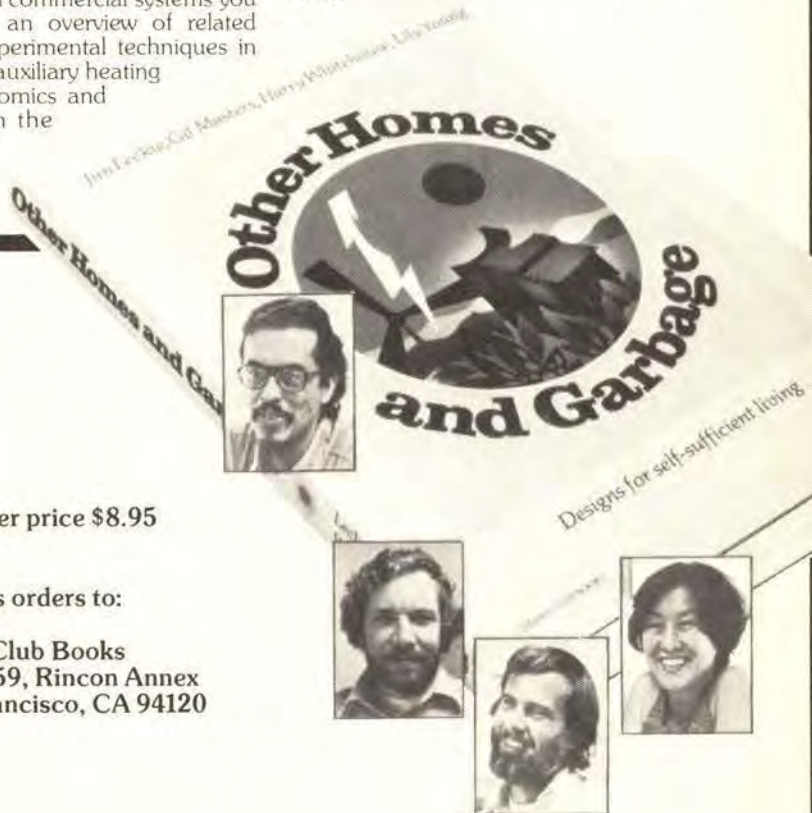
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