

SIERRA

THE SIERRA CLUB BULLETIN

MARCH/APRIL 1980 \$1.50





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Founded in 1892, the Sierra Club works in the United States and other countries to restore the quality of the natural environment and to maintain the integrity of ecosystems. Educating the public to understand and support these objectives is a basic part of the Club's program. All are invited to participate in its activities, which include programs to "... study, explore, and enjoy wildlands."

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Cover: An American egret. Once hunted nearly to extinction for its plumage, the egret is now protected by law. Photograph by Ted Schiffman.

"MOSQUITO BITES"

why suffer them?



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SAVE THE WHALES!



A CRY FOR HELP

The humpback whales once filled the seas with their beautiful, haunting songs. But today the humpbacks are nearing extinction and their survivors are crying for help.

The last of the great whales are being ruthlessly massacred by commercial whalers from Japan, the Soviet Union, Norway and a handful of other nations (Iceland, Spain, Peru, Chile, Brazil, Taiwan and South Korea).

In the past 50 years, more than two million whales have been hunted down by the deadly catcher boats with their grenade-tipped harpoons. Every day, more than 70 whales suffer an agonizing, prolonged death. It is the most cruel and inhumane killing in the world.

Why are these extraordinary marine mammals, whose intelligence is second only to man, being systematically exterminated? To make mink food, fertilizer, cosmetics, whale steaks, margarine and lubricating oil. There are cheap, plentiful alternatives, but the slaughter continues.

OUTLAW WHALERS

The International Whaling Commission (IWC) tries to control whaling by setting quotas and giving "protected" status to some of the most endangered species and populations of whales. But even this meager attempt at regulation has been undermined by unregulated (non-IWC) whalers who kill thousands of "protected" whales annually, including the critically endangered blue and humpback whales.

The most infamous outlaw whaling operation is the pirate whaling ship Sierra, which has roamed the Atlantic for more than ten years, harpooning every whale it could find, even nursing mothers and babies. Flying various flags of convenience (first Bahamas, then Somalia, now Cyprus), the Sierra has shipped thousands of tons of whale meat each year to Japan, an IWC member nation.

Last July, the conservationist ship Sea Shepherd rammed the Sierra, putting a huge hole amidship and the pirates out of action temporarily. But now the Sierra gang has a new ship, the Cape Fisher, and two more, the Susan and the Theresa, ready to go to sea.

Another outlaw operation was set up in Chile. In 1977, a modern stern trawler, the Orient Maru No. 2, was exported from Japan. A document filed with the Japanese government stated: "The purpose of such procurement is its use for shrimp trawling off the coasts of Panama." The ship, re-named the Paulmy Star No. 3, was indeed registered in Panama as a "camaronero," a shrimp boat. But it never got within 3,000 miles of Panama. Instead, it showed up in Chile with a harpoon gun on its bow and began hunting down 500 whales annually

outside any regulation. Whale meat was shipped to Japan. Said one bitter Chilean conservationist: "A harpoon gun is not famous as a productive weapon against shrimp."

In Peru, the Japanese-owned Victoria del Mar whaling company has operated three catcher boats for more than eight years, killing as many as 2,000 whales annually of any species or size, and shipping the meat to Japan. The leading Peruvian news magazine, Caretas, commented last year: "In relation to whales, the Japanese have the fame of Attila the Hun, and granting them exclusive license to hunt whales in our seas in 1970 was a bit like making Dracula a nursemaid."

HELP SAVE THE WHALES

Join the international conservation community in the battle to save the whales from extinction. Only public pressure against the commercial whaling nations will force an end to the senseless slaughter.

Boycott Japanese, Russian and Norwegian products. Hit the whaling nations where it hurts, in their economies. The Japanese whalers are owned and controlled by the giant manufacturing and trading companies that flood the U.S. with cars, TV's, stereos and cameras. The Norwegian government even owns the factory that makes the deadly harpoons. Tell merchants why you are boycotting their products. Tell your friends about the plight of the whales and how they can help.

You can help support our efforts by making a tax-deductible contribution to the Save the Whales campaign. For a donation of \$15 or more, you will receive a beautiful six-color print (20" x 26") of the humpback whales (above) by Richard Ellis.

If you believe in this effort, please give generously. Remember: Extinction is the ultimate crime. Extinction is forever.

Funds contributed will be used to inform the public of the problem of whale survival and how to help end the killing. The Animal Welfare Institute is a non-profit, educational organization established in 1951 to reduce animal suffering and protect endangered species. A copy of AWI's annual report is available on written request to AWI or to the N.Y. State Board of Social Welfare, Albany, N.Y. 12223.

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Wilderness in Jeopardy



EFFORTS TO preserve the last of our unprotected forest wildlands are in trouble. A bill now before Congress would immediately throw open to development some 36 million acres of potential wilderness areas throughout the nation. The pressure from industry is on, and your help is needed to fight back.

More than fifteen years ago, Congress decided that wilderness preservation was an important goal for our nation, and that the selection of areas for wilderness designation was too important a task to be left exclusively to the Forest Service, an agency under heavy timber-industry pressure to log its lands. Since that time, Congress itself has examined candidate areas, deliberately, one at a time, through the time-tested process established by the Wilderness Act, taking into account not only national needs but also the views of local citizens and members of Congress.

Now a bill backed by the timber industry threatens to close the door forever on additions to our National Wilderness Preservation System. Awaiting action in the House of Representatives, the bill places in jeopardy every proposed forest wilderness, large and small, throughout the nation. This anti-wilderness bill, H.R. 6070, introduced by Representative Thomas Foley of Washington, would permanently designate as "non-wilderness" some 36 million acres that were dismissed from wilderness consideration by RARE II, a hastily conducted Forest Service study. It would similarly condemn even the roadless lands recommended for wilderness consideration by this study unless Congress so designated them by the end of 1983. And the Foley bill would establish another arbitrary congressional deadline—for all lands the Forest Service recommended for "further study." If those lands were not designated as wilderness by the end of 1986, then they automatically become non-wilderness—and open to logging. By establishing these deadlines, the opponents of wilderness hope to sneak into law a mechanism to assure that roadless lands will lapse into permanent non-wilderness status solely through congressional inaction.

Immediately at stake are the 36 million acres of high-quality roadless lands tagged as non-wilderness by the Forest Service's inept RARE-II study. At a single stroke, the Foley bill would open almost 2000 separate areas in 37 states to logging and other disruptive uses.

At the heart of the push for the Foley bill is the cry of the timber industry and its allies for "certainty"—their shrill insistence that they must quickly know once and for all which still-unexploited forest lands will be open for logging and road-building—and, of course, they want almost all of them to be open. What the industry *doesn't* say is that more than 100 million acres, the most productive two thirds of the national forests, are already open to logging; and the timber industry is cutting trees on that land faster than they can grow back. Now the industry wants to cut the old-growth timber on what little remains of our wilderness heritage, the least productive lands, where timber grows slowly because of steep slopes, high elevations, and other factors.

To arrive at such clear and immediate allocations, the Foley bill would change the review process that Congress has relied on over the years when considering wilderness proposals. This careful process is area-specific, allowing deliberate review of individual proposals, with citizen participation and local hearings.

The Foley bill would eliminate all this by establishing blanket guidelines and a nationwide timetable to rush congressional consideration. Its passage would deny local conservationists an opportunity to work toward an optimal-use plan for the roadless lands in their own areas, with their own members of Congress and with other local citizen groups.

The insensitivity of the Foley bill comes as no surprise, considering its supporters—the National Forest Products Association, the American Petroleum Institute, the United Four-Wheel Drive Associations, and other special interests that oppose wilderness. Furthermore, some 38 members of Congress have already succumbed to the influence of the industry's lobby and signed on as cosponsors of the measure. This bill is clearly the timber industry's biggest effort yet to rip asunder our remaining wilderness heritage. It must be defeated. —*Theodore A. Snyder, Jr.*

William O. Douglas

1898-1980

"Wilderness values . . . are basic to our national well-being, and they must be honored by any free society that respects diversity. We are dealing not with transitory matters, but with the very earth itself. We who come this way are merely short-term tenants. Our power in wilderness terms is only the power to destroy, not to create. Those who oppose wilderness values today may have sons and daughters who will honor wilderness values tomorrow. Our responsibility as life tenants is to make certain that there are wilderness values to honor after we have gone."

—From A Wilderness Bill of Rights



Wide World

Lubricating Congress

A shocking analysis of how Big Oil buys votes—and influence. How can we have independent legislators when so many are on the payroll?

EDWARD ROEDER

PRESIDENT EISENHOWER vetoed, in 1956, a bill to remove governmental controls on the price of natural gas because of lobbying efforts he deemed "so arrogant and so much in defiance of acceptable standards of propriety as to risk creating doubt among the American people concerning the integrity of governmental processes."

Eisenhower was offended by a \$2500 contribution given by an oil and gas company's lobbyist to the campaign of Senator Francis Case (R-South Dakota) a few weeks before the Senate was to vote on the bill, which Case favored.

There were no strings attached to the contribution, but Case was so affronted by it that he took to the Senate floor to disclose the incident and denounce the power of the petroleum industry; he voted against the bill.

"The creation of a class of petroleum interests who can seek to affect the choice of many states' representation in the Congress," Case warned the Senate, "is a far greater danger to the country than a temporary shortage of gas."

Times have changed on Capitol Hill since then, and the "acceptable standards of propriety" cited by Eisenhower have changed as well.

All but two of the 35 senators elected or reelected in 1978 received contributions from oil interests amounting to more than the \$2500 that was so objectionable 24 years ago. (These and the following statistics do not reflect resignations from the House after September 25, 1979.)

Those 33 senators each received an average of \$47,372, a total of nearly \$1.6 million, from oil-industry sources. Close to another \$1.6 million in oil money went to winners of 1978 campaigns for seats in the House, and other contributions from oil interests of more than \$750,000 helped finance the campaigns of those senators elected in 1974 and 1976.

In all, oil interests gave more than \$3.9 million in direct

contributions to the campaigns of members of the 96th Congress. Asked if the money might create conflicts of interest or an appearance of impropriety for legislators whose votes benefit the petroleum industry, most of the ten senators and representatives who received the largest amounts had one nearly identical comment: "No more than other contributions from [other private economic interest groups]."

Oil lobbyists (and those of other interest groups) now openly declare their intentions to use large sums of money to influence many states' elections of senators and representatives. "What better way to decide who gets elected than to support those who choose policies likely to favorably affect me and my company?" asked the top Washington lobbyist for Continental Oil (Conoco), the nation's ninth-largest oil company.

Such efforts are entirely legal. Campaign finance "reforms" enacted by Congress in the post-Watergate period have legitimized contributions of up to \$10,000 per candidate from the political fund of a single corporation, trade association, labor union or other interest group—though these contributions are not corporate funds.

The same reforms created the Federal Elections Commission (FEC), which administers campaign-financing laws. But the FEC does not enforce the law requiring campaigns to list the name, address, occupation and place of business of each contributor who gives more than \$100. Nearly half the money that financed the 1978 congressional elections came from sources that either were not disclosed to the voters at all or were not fully identified in campaign finance reports as required by law.

Nonetheless, it is possible from analysis of the campaign finance reports on file at the FEC to identify more than \$3.9 million in direct contributions given by oil interests to the campaigns of winning candidates now in the House and Senate.

Oil interests gave far more money to members of the Senate,



where energy legislation passed by the House has been bottled up for months. Of the 100 senators, 91 received contributions from oil interests that total \$2,323,025.

A majority of the Senate, 55 senators, received more than \$5000 each from oil interests. Those 55 senators got a total of \$2,196,646 in oil money, an average of \$39,939 each.

Candidates who won seats in the House in 1978 reported receiving a total of \$1,641,975 in contributions from oil interests.

Contributions to House members, all of whom are elected to two-year terms, were reported by the candidates between January 1, 1977, and December 31, 1978. Contributions to senators, a third of whom are elected every two years to serve six-year terms, were reported between January 1 of the year preceding their elections (in 1974, 1976 or 1978) and December 31, 1978.

In both houses of Congress, Republicans received far more money from oil interests than did Democrats, though Democrats outnumber Republicans by 59 to 41 in the Senate and by 276 to 159 in the House. Overall, Democrats in both houses received a combined total of \$1.6 million from oil industry sources, while their less-numerous Republican counterparts received \$2.4 million, about 50% more.

Two thirds of the House Democrats, 181 of 276, received some campaign money from oil interests, a total of \$788,903 and an average of \$4359 for each of those who got any oil money at all.

Seven eighths of the Republicans in the House, 138 of 159, received oil-industry contributions totalling \$853,072, an average of \$6182 apiece.

All but one of the 41 Senate Republicans received contributions from oil interests, a total of \$1,545,487 and an average of \$38,637 for each of the 40 who got the money.

Among Senate Democrats, 51 of the 59 received campaign contributions from oil interests, a total of \$777,538 and an average of \$15,245 each.

The oil industry's preference for Republicans becomes clearer when a comparison is made of the average amounts of oil money contributed to the members of each party in Congress, including those elected without the help of any oil money.

House Democrats got an average of \$2858 each from oil interests, while Republicans averaged \$5365 apiece, nearly twice as much.

Each Democratic senator got an average of \$13,178 from oil industry contributors. The Senate Republicans received an average of \$37,694, nearly three times as much per senator as the Democrats received.

Eighty-seven percent of the crude oil produced in the United States in 1978 came from seven states—Texas, Louisiana, California, Alaska, Oklahoma, Wyoming and New Mexico—and no other state produced as much as 2% of the total domestic oil.

Most members of Congress elected from the seven major oil-producing states received large oil-industry contributions; each representative received an average of \$9341, and

each senator received an average of \$82,744.

But oil interests contributed more to influence congressional elections in other states. In the Senate, nearly half the oil money, \$1,164,609, went to 77 of the 86 senators from the other states. In the House, 52% of the contributions from oil interests, \$847,999, went to representatives from the 43 other states, which produced a combined total of only 13% of the nation's domestic oil.

Members of Congress from every state received contributions from oil interests. The smallest amount for any state went to the Vermont delegation, where both senators and the state's sole representative received contributions totaling \$888. Vermont produces no oil and is highly dependent upon imported oil refined in other states.

The delegation from Texas, the state that produces more oil than any other, received more oil money than any other state delegation, a total of \$914,250 for its two senators and 24 representatives, more than a fifth of all the oil money contributed

Overall, Democrats received a total of \$1.6 million from the oil industry, Republicans about 50% more.

to the entire Congress.

The contributions came directly from individuals in the oil business and from political-action committees (PACs) formed by oil interests. PACs are legally established political funds that usually raise money for influencing elections from people connected with an interest group, such as a corporation, trade association or labor union.

Under present federal law, individuals may contribute up to \$1000, and PACs up to \$5000, per candidate per election. But for practical purposes, the limits are usually double those amounts or more, since contributors may give the maximum amounts for primary campaigns (whether or not the candidate is opposed in a primary election) and then contribute the maximum amount again for runoff and general election campaigns. Further, individuals may contribute to many PACs, and PACs may transfer money to other PACs, which can then contribute to the same candidates.

Indirect contributions by oil-related individuals or PACs to party organizations or to other PACs not linked to the oil business are not included in the \$3,965,000 analyzed here, which consists entirely of direct contributions reported by the winning candidates.

A total of \$2,672,813 was spent in 1977 and 1978 by 94 PACs organized by oil and gas interests, according to FEC reports. About \$636,000 of this was spent by PACs formed by oil-industry trade associations and groups of independent oil men. The remainder—about \$2 million—came from PACs organized by corporations in the petroleum business. All corporate PACs in the United States spent \$15.3 million during

The purpose of PACs is simple— to purchase a more favorable political climate for corporate donors by influencing elections.

1977 and 1978; more than one of every eight dollars spent by all corporate PACs from all segments of American industry and commerce came from an oil-company PAC.

Roughly half the amount spent by the oil PACs was reported as direct campaign contributions totaling \$1.5 million, received in 1977 and 1978 by candidates who were representatives and senators in the 96th Congress. PACs spent the rest on other political activities, contributed it to candidates who lost at the polls or transferred it to other PACs—many of which also made contributions to political campaigns.

"The purpose of our PAC," said Theron J. Rice, director of legislative affairs for Conoco, "is to try to change the philosophical makeup of the Congress. We gave 47% of our funds last year to nonincumbents. We're trying to replace regulation-oriented members of Congress with those who favor letting the free market work and putting an end to all this regulation and allocation of oil."

Continental Oil, ranked by *Fortune* magazine as the 18th-largest industrial corporation in the United States, has a relatively small PAC. The Conoco Employees Good Government Fund gave \$25,050 to congressional candidates in 1977 and 1978. "We just went to payroll withholding [of PAC contributions from executives' paychecks], so we hope to have more money next time," Rice said.

Rice opposes legislation pending before the House that would limit the total amount any congressional candidate could receive from all PACs. "We don't like that because we think a lot of incumbents ought to be replaced," he said.

Rice sees PACs as a way to expand democratic participation in the electoral process. "There is no corporate control over the PAC," Rice said. "In no way do they [Conoco management] control it." But according to the charter of the PAC, its officers are "appointed by the chief executive officer of Conoco, Inc.," and "may be removed from office at any time by the appointing party." These are typical provisions in the charters of corporate PACs.

A registered lobbyist who also helps decide which candidates will get contributions from the PAC, Rice volunteered that the PAC is not used to bribe members of Congress. "We never think we buy anything in the way of a vote," he said. "The only thing we buy is some access and recognition of our support." He said that members of Congress are "very rarely turned around" by a contribution.

The biggest corporate PAC in the country is AMOCO PAC, formed by Standard Oil of Indiana. It spent a total of \$266,300 in 1977 and 1978, nearly 10% of all the spending by all oil-industry PACs. Much of the money was given to Standard Oil's state political organizations and spent on other political activities, but \$154,800 was contributed directly to congressional candidates.

Rady A. Johnson, Standard Oil's general manager for governmental affairs, said, "One purpose of the PAC is disclosure, to make sure that no one did anything wrong" and thereby avoid scandals of illegal corporate political activity such as the one that rocked Gulf Oil in the early 1970s. Johnson, a regis-

tered lobbyist, recommends candidates to a committee of PAC officers appointed by Standard Oil's management.

"Everything is a consideration," Johnson said. "We look at the status of the race; is [the candidate] a Republican, Democrat, ranking minority member or chairman [of a congressional committee]. If you look at our contributions last time, we were pretty heavy in [contributions to campaigns for] open seats, and probably gave about 75% Republican and 25% Democrat."

"It works two ways," Johnson said. "My gut feeling is, you make a recommendation that the PAC give him money because you like the way the guy thinks or acts. They [members of Congress] are always after you for money. In most cases, we usually have a plant or facility and employees in his district. . . . Does a senator identify with me and our company because of our PAC? I don't think so. It doesn't hurt, let's put it that way."

Of the nearly \$4 million in oil money given as direct campaign contributions to winning candidates for seats in this Congress, about 38% came from PACs and 62% came from individuals linked to the oil industry.

Individual contributors included in this analysis are executives, directors and major stockholders of oil companies and petroleum trade associations, independent oil men and fuel jobbers, registered lobbyists of oil companies and trade associations and their dependents listing the same surnames and addresses.

The biggest group of individual contributors in the oil industry was of people connected to Quintana Petroleum Corporation, a relatively small oil company in Houston. At least fifteen people connected with Quintana made contributions to congressional campaigns, totaling at least \$81,400 in 1977 and 1978. A company spokesman and various company officials who contributed failed to return a total of twelve calls from a reporter, but Meredith Long, a Houston art-gallery operator whose wife is a major shareholder in Quintana, said that, as campaign contributors, "we're not really a company, we give as individuals."

Another major group of individual contributors with oil-industry connections was the Pew family of Pennsylvania and Texas, which acquired its wealth through large holdings in the Sun Company, now America's eleventh-largest oil company, with more than 240 subsidiaries.

John G. Pew, whose father's uncle founded Sun Oil in 1876, was in charge of domestic and foreign oil production operations for the company until his retirement ten years ago. Pew and members of his family contributed more than \$70,000 to PACs and candidates in 1977 and 1978.

Pew said he doesn't attempt to lobby legislators or influence them through his contributions. "Hell, I'm 77 years old," he said. "I don't buy votes. I know whether they're conservative or not—I'm a Republican."

Pew said he only occasionally speaks with the candidates he

AH WILDERNESS

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supports. "I'm more against their opponents in some cases than I am for them," Pew said. "I'm interested in the country, and I want good government."

Do these contributions get results? "I have no doubt that energy policy has been slanted in favor of the oil companies by their slick, well-targeted, big contributions," said Representative Morris Udall (D-Arizona), chairman of the House Interior and Insular Affairs Committee and a frequent opponent of oil interests.

In both houses of Congress, on vote after vote, there has been a consistent correlation between votes and oil-industry contributions. When the House of Representatives voted on May 16, 1979, to prohibit development of large portions of the Alaskan wilderness, oil interests opposed the bill because it would close off the lands to oil exploration. A key vote came on an amendment sponsored by representatives Morris Udall and John Anderson (R-Illinois) to protect greater areas of Alaska from oil and gas exploration; it passed by a vote of 268-157. The representatives who voted against the oil interests had gotten an average of \$1855 in oil money for their 1978 campaigns. Those who cast pro-oil votes on the measure received almost four times as much, an average of \$7055.

In 1975 the oil lobby suffered its biggest defeat in recent

times, the loss of the cherished depletion allowance that protected oil revenues from the income tax. The representatives still in office who voted with the tax reformers and against the oil lobbies to repeal the oil-depletion allowance got an average of \$1324 apiece in oil money for their 1978 campaigns. Those who voted pro-oil, to retain the special tax break for oil producers, received an average of \$4571 each for their most recent campaigns.

In the Senate, the record is even more stark. Senators still in office who voted against the key amendment on oil depletion got an average of \$3326 in oil money during or since their most recent campaigns. Those who voted pro-oil got \$46,545 in oil money, some fourteen times as much.

When President Ford decided to put an end to government price controls on home heating oil, there were efforts in both houses to pass a "one-house veto," a resolution that would have stopped the President's decision from taking effect. In both houses, the resolutions collapsed under heavy pressure from the oil lobbies.

The representatives still in office who voted for the resolution to preserve price controls got an average of \$1391 each from oil interests for their most recent reelection campaigns. Those who voted as the oil lobbyists wanted, to allow price

Contributions and Committees

The House Ways and Means Committee originates all tax legislation, including specifically oil-related measures such as the windfall-profits tax and repeal of the oil-depletion allowance, and has jurisdiction over legislation affecting oil imports. Of the 36 members of Ways and Means, 29 received a total of \$146,415 from oil interests for their 1978 campaigns, an average of \$5048. Among Democrats, 18 of 24 got oil money, an average of \$4123. Eleven of the 12 Republicans received an average of \$6563 each.

The House Interior and Insular Affairs Committee considers legislation affecting oil drilling, Alaskan oil, the use of public lands, offshore oil drilling, and much of the environmental impact of the oil industry. Of the committee's 40 members, 33 received financial help from oil interests for their last campaigns, an average of \$6814 to each and a total of \$232,066.

The oil money was even more concentrated within the Energy and Environment Subcommittee of Interior, where 18 of 21 members got a total of \$147,359, an average of \$8186. All 7 Republicans on the subcommittee received contributions from oil interests, an average of \$12,405 apiece. Eleven of the 14 Democrats received an average of \$5502 apiece.

The House Interstate and Foreign Commerce Committee has jurisdiction over oil pipelines, clean-air legislation, public utilities, public health, and consumer affairs. All but 6 of its 42 members received oil-industry contributions for

their 1978 campaigns, an average of \$6306 to each.

And on the Energy and Power Subcommittee of the Commerce Committee, to which major legislation affecting petroleum interests is usually referred, 16 of 19 members received oil-industry contributions averaging \$9488 apiece. Eleven of the subcommittee's 13 Democrats got oil money, for an average of \$9126. And 5 of the 6 Republicans received average contributions of \$10,284.

The Senate Finance Committee roughly corresponds to the House Ways and Means Committee, and has jurisdiction over oil imports and tax legislation intended to provide or remove special tax incentives and advantages or penalties. This committee is in the process of amending the windfall-profits tax passed by the House last summer.

Every senator on the Finance Committee received campaign money from oil interests, for a total of at least \$607,114 and an average of \$30,355 to each senator during or since his last campaign. In the Senate as a whole, Republicans got twice as much oil money as Democrats, but on the Finance Committee, Democrats received an average of \$35,675 per senator while Republicans averaged \$22,375.

The Senate Energy and Natural Resources Committee has jurisdiction over oil drilling, production and distribution, offshore-oil leases, and the use of public lands. Of the 18 committee members, 14 received campaign contributions from oil interests during or since their last campaigns, a total of \$365,377. Seven of the 11 Democrats on the committee got oil money, an average of \$23,851 to each. And all 7 Republicans on the committee received oil money, an average of \$28,345 apiece. □

Senators who supported big-oil positions received about 14 times as much as those who did not—an average of \$39,495 apiece.

controls to end, got an average of \$3593 apiece for their 1978 campaigns.

The senators who voted to maintain price controls on heating oil got \$2854 in campaign gifts from petroleum interests. Those who went along with the oil lobby got about fourteen times as much, an average of \$39,495 apiece.

This pattern has continued into the current Congress, where the big oil issue has been the windfall-profits tax. The key votes in both houses came on amendments to drastically change the amount of the tax. In the House it was a substitute bill offered by Representative Jim Jones (D-Oklahoma), who received more than \$28,000 in oil money for his 1978 campaign. As far as the oil lobby was concerned, the Jones amendment was the key vote of the year in the House. They worked hard for it, and it passed by a vote of 236 to 183. The representatives who voted for a higher windfall-profits tax and against the Jones amendment had gotten an average of \$962 apiece from oil interests in their last campaigns. Those who supported the oil lobbies by voting for the amendment had received substantial support in 1978—an average of \$6016 apiece.

The weakened tax bill, already more acceptable to the oil

lobbies than the one proposed by President Carter, was further reduced by the Senate Finance Committee, whose 20 members each received substantial contributions from petroleum interests, an average of more than \$30,000 apiece.

Senator Dale Bumpers (D-Arkansas) offered an amendment to return the tax to the level passed by the House of Representatives. Bumpers' amendment was rejected, 50-32. The 32 senators who voted against the oil interests—for a higher tax—had gotten an average of \$4003 apiece in oil money during or since their last campaign. The 50 who voted to kill Bumpers' amendment, as the oil lobby urged, had gotten an average of \$36,233 apiece.

Many conservationists, even those highly experienced in the realities of congressional politics, are surprised and dismayed at the degree to which oil-industry contributions seem to have influenced the election and policies of our legislators. It is not a pleasant story, but it is one conservationists had better face—if tomorrow is to be any different. □

Edward Roeder is a free-lance writer in Washington, D.C., specializing in campaign financing. This article is adapted from a three-part series that originally appeared in the Sacramento Bee.

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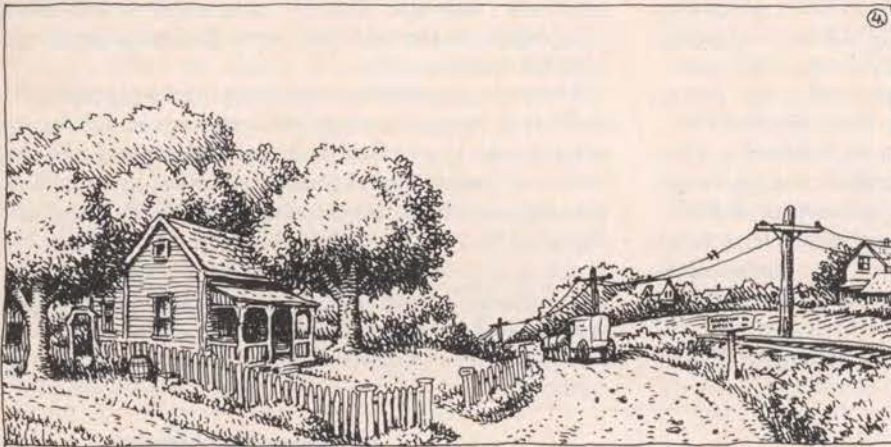
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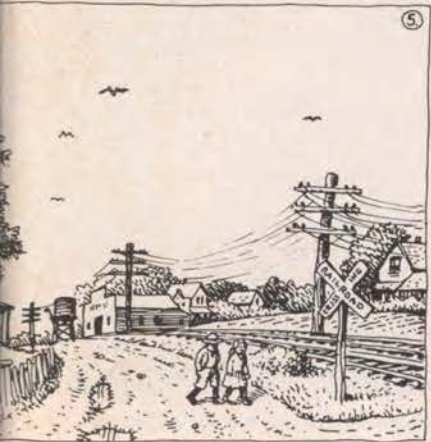
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A SHORT HISTORY OF AMERICA ~



BY R. CRUMB



William Bartram's Travels

JOHN I. MERRITT

IN MAY 1775, two years into his lengthy exploration of the American Southeast, William Bartram rode onto a ridge in North Carolina and looked down into what can only be described as an enchanted valley. Bartram recalled the scene later in his famous *Travels*: Deer grazed in the spring meadow and wild turkeys strutted among the wildflowers, while a company of young Indian women cavorted on the hillside, bathed in the valley stream and lolled in the shade of magnolias, "disclosing their beauties in the fluttering breeze." The 36-year-old naturalist and his companion of the day, a young trader, watched unseen as the girls chased each other and crushed on their lips and cheeks the wild strawberries they had been collecting. Overcome by "their delicious sports," the two voyeurs, "nature prevailing over reason," crept down the hill in hopes of joining in the frolic of the "Cherokee virgins."

Alas, a guard of Indian matrons gave the alarm. The maidens scattered. Bartram and the trader ran like satyrs and intercepted a group of them, who took shelter in a grove and peeped through the bushes at the men's panting approach. Something in the whites' visages must have signaled that their intentions were honorable, for after a few moments the

blushing young women stepped into the open and shyly advanced, holding out baskets of strawberries and "merrily telling us their fruit was ripe and sound."

Whatever this scene may tell us of Bartram's personal interests, it serves as an outstanding example of his philosophy of nature. To Bartram, the natural world was "inexpressibly beautiful and pleasing," and its native inhabitants lived in a state of grace. The wild America he roamed from 1773 through 1776 presented in its "amplitude and magnificence . . . an idea of the first appearance of the earth to man at the creation."

William Bartram's pastoral vision was at marked variance to the more detached view held by his flinty father, John, proprietor of Bartram's Garden in Philadelphia and the man whom Linnaeus called "the greatest natural botanist in the world." John Bartram was a tough, self-educated, self-made Quaker farmer whose early field trips through eastern Pennsylvania, the Catskills, coastal New Jersey, Maryland and Virginia were made only after the fall harvest was in. Although something of an ethnologist, he had little use for Indians; his father had been killed by Indians on the Carolina frontier, and their uprisings occasionally interfered with his own explorations.

One of eleven children sired by the crusty botanist, William typified the well-born scion of a man who had come up the hard way. While John had minimal schooling and in fact was only marginally literate, his son received the best education available, at Benjamin Franklin's

Philadelphia Academy. Through hard work and a good business sense, John had become a prosperous farmer and landowner, but William showed no inclination for either farming or commerce and whiled away his youth reading, shooting and drawing birds and plants.

Packed off at age 21 to earn a living as a trader at Cape Fear, North Carolina, William failed. When in 1765 his father passed through on a field trip to Georgia and Florida, the younger Bartram forsook his troubles to join him. This was the last and greatest journey of John Bartram's long and fruitful life. With his son, he ascended the St. Johns River 400 miles to its source—the first white men to do so—and among the many flora they discovered was *Franklinia altamaha* (named after Ben), a flowering shrub that, while widely cultivated, has not been found in the wild since 1803.

Against his father's better judgment, William decided to stay on in Florida and try his hand as an indigo planter on the St. Johns. He turned out to be even more inept at farming than he had been at commerce. A failure once more, William returned to Philadelphia and, no doubt to his father's chagrin, hired out as a day laborer. Eventually he moved back to Cape Fear, opened his business again—and sank heavily into debt. His father bailed him out, but prudently deeded Bartram's Garden to William's younger brother, John, Jr.

Billy Bartram's star would soon be rising, however. He had been sending occasional drawings to Dr. John Fothergill, a

botanist and one of his father's London patrons, who, despite reservations about the younger Bartram's dependability, agreed to finance another trip that William proposed to make through the Carolinas, Georgia and Florida. The arrangement proved felicitous to science and to *belles lettres* as well. William flowered into his full potential as a naturalist and writer, and from his four years of wandering in the wilderness would come *Travels*—his peculiar but lasting contribution to the literature of nature. In the *Travels*, Bartram wedded a romantic vision to a keen descriptive eye, and the fantastic world he portrayed would be reflected in some of the great poetry of his age.

Bartram returned briefly to Philadelphia; then, bidding his father and mother goodby, he set sail for Charleston in March 1773. Over the next year he toured virtually all of coastal Georgia and much of the inland part of the colony by foot, horseback and canoe. In early spring of 1774 he sailed for his old haunts on the St. Johns River, in what was then called East Florida.

The St. Johns rises out of its swampy headwaters above Lake Okeechobee and drains much of central Florida in its northerly meandering to the sea near the Georgia border. It is a big river, several miles wide through much of its lazy run, lined with cypress, palms and live oaks festooned with Spanish moss, and at several points the river broadens into wide, shallow lakes. In Bartram's day, as now, there is a vastness to it that takes one's



In 1765, John and William Bartram explored the St. John's River; John noted that "many live oaks grew, near two foot in diameter."



breath away. Along his route, thick grapevines wove a tangled canopy through the treetops. Groves of orange trees—native to the Iberian peninsula and brought to Florida by the Spaniards two centuries earlier—grew wild on ridges, and the sweet smell of their flowers wafted across the water as he made his way upriver. Pelicans pumped across the bow of Bartram's canoe, egrets and herons stalked the banks, and great flocks of sandhill cranes wheeled in the sky, filling the air with their "musical clangor."

"Impelled by a restless spirit of curiosity," Bartram added numerous discoveries to the taxonomic lists, including the royal palm, yellowroot, oil nut, oakleaf hydrangea and golden primrose. He also described in detail all manner of fish, frogs, snakes, tortoises, lizards, mammals and birds. Among all the creatures Bartram encountered, however, none made so great an impression as the alligator, whose bellowings he is said to have heard in nightmares for the rest of his life.

His first encounter with the big reptiles occurred on the upper St. Johns, upstream from Lake Dexter. He had moored

his boat and camped on a promontory with a "free prospect of the river, which was a matter of no trivial consideration to me, having good reason to dread the subtle attacks of the alligators, who were crowding about my harbour." Determined to row to a nearby lagoon to fish for his supper, Bartram armed himself with a club and set out to run the reptilian gauntlet. He was not halfway to the lagoon when the attack came, and his boat was nearly upset.

"My situation now became precarious to the last degree: two very large ones attacked me closely, at the same instant, rushing up with their heads and part of their bodies above the water, roaring terribly and belching floods of water over me. They struck their jaws together so close to my ears, as almost to stun me, and I expected every moment to be dragged out of the boat and instantly devoured."

Bartram beat off the attack and eventually made it back to camp, where he shot one of his pursuers bold enough to follow him ashore. At dusk, gazing across the river, he discovered the reason for the vast numbers of alligators. They



"The enchanting little Isle of Palms. This delightful spot, planted by nature, is almost an entire grove of palms. . . ."

had formed a solid phalanx across the Lake Dexter inlet to intercept fish on their migratory passage downriver—"from shore to shore, and perhaps half a mile above and below me . . . one solid bank of fish." The water boiled with thrashing alligators tearing through the great throng of fish. Bartram watched the bloody melee until the light faded, and he listened through the night as the slapping and churning and clapping of jaws drifted up through the orange trees. The revelation that the alligators were after fish—and not him!—filled him with relief, and except for a visit from two bears drawn by the smell of his cookpot, the night passed uneventfully.

The naturalist dallied in the wilderness of the upper St. Johns, "under the care of the Almighty, and protected by the invisible hand of my guardian angel." Despite alligators, wolves and mosquitoes, it was a benign wilderness indeed. He went as far as New Smyrna on the coast and, returning downriver, made a side trip to Salt Springs. This "amazing crystal fountain"—one of many he would visit in the limestone geology of central Florida—particularly enchanted him as it surged from an underwater cavern and



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flowed through miles of meadows into Lake George. Borne on jets of water that pushed them toward the surface, brightly colored fish floated like butterflies in the "cerulean ether." Since each species of fish kept to itself and he saw no evidence of predation, it appeared to the Quaker Bartram as a kind of aquatic peaceable kingdom.

Joining a caravan of traders, Bartram rode northwest from Lake George through oak and pine forests to the shores of what is now Orange Lake, south of Gainesville. Here they were greeted by Indians, and in the lodge of the chief they passed the calumet and a bowl of ceremonial gruel. An elderly chief, called the Cowkeeper—"a tall, well-made man, very affable and cheerful . . . his eyes lively and full of fire"—took an instant liking to Bartram and gave him blanket permission to range the tribe's country in search of specimens. He also bestowed on the naturalist the name by which the Creeks and Seminoles would know him, Puc Puggy, the Flower Hunter.

The Creeks had existed on the fringes of Spain's colonial empire for two centuries (the Spanish settled St. Augustine in 1565 and ceded Florida to Britain in 1763). By the time Bartram encountered them, their culture had been heavily influenced by European contact—crucifixes hung from wampum collars, and they herded horses and cattle on the Alachua Savanna. White civilization then had not debased them, however. Bartram admired their fierce independence, noting that while many were baptized and Spanish-speaking, "yet they have been the most bitter and formidable Indian enemies the Spaniards ever had." The Upper Creeks, or Muscogulges, had cut the old Spanish Road between St. Augustine, on the Atlantic, and St. Marks, on the Gulf of Mexico, effectively restricting colonial settlement to the coast. The Lower Creeks, or Seminoles, while "a weak people with respect to numbers," controlled virtually all of the peninsula's swampy interior.

With the blessings of his friend the Cowkeeper, Bartram visited the "Little St. Johns" (Suwannee), Florida's main river on the Gulf Coast. It struck him as a wild and alluring country as he stood on an arm of high ground and looked across "the most extensive Canebreak that is to be seen on the face of the whole earth." But noting the region's fair climate and rich soil, he also foresaw a time when the land under cultivation would become "rich, populous, and delightful." This sentiment would be echoed later when,

crossing the "vast and rolling Alachua Savanna," he mused that it could someday support more than 100,000 people in a rural utopia. Bartram was not unaware of civilization's destructive impact—he was sharply critical, for instance, of English planters who tore out entire groves of wild orange trees to sow corn and indigo. But his paeans to uncorrupted nature notwithstanding, his vision remained firmly human-centered, straight out of Genesis and in keeping with his Quaker upbringing.

Bartram departed his beloved East Florida in the autumn of 1774. He spent the winter in Charleston and, in April of the following year, set out for the rugged Cherokee country and the lands beyond the mountains. During the next two years he explored western Georgia, North and South Carolina, West Florida, and southern Alabama and Mississippi. He was happy enough in his further travels, although one senses that his spirit of exploration had at last begun to flag. Alone in the Nantahala Mountains (shortly after his idyll with the Cherokee virgins) he recalled his stay among the "amiable and polite inhabitants of Charleston" and compared himself to Nebuchadnezzar, "expelled from the society of men, and constrained to roam in the mountains and wilderness, there to herd and feed with the wild beasts of the forest."

The Bible he carried throughout his

travels may have mitigated his loneliness but could do nothing for the physical problem that now beset him. His eyes became seriously inflamed, laying him up for five weeks. The malady disrupted his itinerary and was serious enough to convince him to return home. Leaving his collection of seeds, roots, dried plants, bird and animal skins, fossils and other exotica in Mobile for forwarding to Dr. Fothergill in London, he joined a trading caravan bound for Charleston. In January 1777 he arrived by ship at Philadelphia.

William settled into civilized life and, following his father's death that fall, he gradually assumed the elder Bartram's mantle as resident sage along the Schuylkill. Drawing from copious notes compiled during four years of exploration, he set to work writing *Travels*, which was published in 1791 in Philadelphia and the following year in London. By 1801 it had been translated into German, Dutch and French and had run through seven European editions. The book drew mixed reviews at home but proved an instant success abroad. Perhaps Bartram's lyrical rendering of the American wilderness was too much for his utilitarian countrymen, who looked on the continent's wild reaches as something to conquer rather than savor. But to Europeans his descriptions were literally fantastic.

Among the *literati* who appreciated

"The vast lake, or marsh, called Ouaquaphenogaw [Okefenokee Swamp]" —William Bartram



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Bartram's rhapsodic accounts were two young poets, Samuel Taylor Coleridge and William Wordsworth. A dream may truly have inspired Coleridge, as claimed, to write "Kubla Khan," but it was Bartram's *Travels* that inspired the dream itself. The poet's Alph, the sacred river, surging from "caverns measureless to man" and "meandering with a mazy motion/Through wood and dale," came right out of Bartram's description of central Florida's limestone hydrology, while "many an incense-bearing tree" and "forests ancient as the hills/Enfolding sunny spots of greenery" were borrowed from his account of the Nantahala Mountains. Likewise, the rumblings of the thunderstorm in "The Rime of the Ancient Mariner" were first recorded by Bartram on his wilderness journeys. Wordsworth's pastoral scenes in "Ruth" and his nature passages in *Prelude*—indeed, his entire philosophy of nature—show Bartram's influence as well. The naturalist's descriptive passages also echo in the works of Robert Southey and the French poet Francois Rene Chateaubriand.

Travels was important for more than its literary influence, of course. As a work of natural history it made significant contributions to the botany, zoology and ethnology of the new world. It was "the first ornithological contribution, worthy of the name, written by an American," according to Witmer Stone. Bartram catalogued 215 species of American birds—the most complete list to that time—and wrote the first serious study of their migratory habits, while his voluminous record of the culture of the Creeks, Seminoles and Choctaws is still read by anthropologists.

Although the self-effacing Bartram did not intend it, *Travels* remains above all a monument to its author, for in exalting the American wilderness he celebrated himself as well. "There is a strong lyric quality that makes the *Travels* throughout a revelation of the personality of William Bartram," his biographer, Ernest Earnest, has written. "Few books are so completely synonymous with their creators."

Bartram made no more extended journeys. The long Indian summer of his life ended suddenly and appropriately on a July morning in 1823, when the 84-year-old naturalist dropped dead in his garden shortly after completing an article on the natural history of a plant. □

John I. Merritt is a public-affairs administrator at Princeton University and a free-lance writer on natural history and the outdoors.

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Skiing a North-Country Neighborhood

ROBERT TREUER

We each had our own motives and agendas. People usually do.

At the sporting-goods store in International Falls where I rented cross-country skis and boots the night before, the owner chatted with me after sharpening one youngster's hockey skates and advising another on different ski waxes, some for cold weather, others for warmer days.

"I used to work for Boise Cascade," he said. "They wanted me to transfer to the main office in Idaho, and I couldn't bear to leave this country."

"The price of success?"

"I suppose. But it's hard to make a living here. I finally qualified for a teacher's certificate, and I'm teaching school. My wife and I run this store, which I just love. You can say we stayed here because of the park. You going to ski in the park?"

"Yes—tomorrow we'll drive to Ash River, ski up to Hoist Bay and around some of the Namakan Islands."

"It should be a good day for it."

It was the end of winter. There were still more than two feet of snow on the thick lake ice. Melting and the breakup of the ice was still wishful thinking, but the fish houses were being dragged off the ice on the chance that it would warm up any day.

"I've canoed through the border lakes and in the Quetico," I told him, "but this is my first winter visit here." I expounded on my private theory that short, bowlegged people such as I have an advantage over tall, long-legged folks on snowshoes. I had tramped over a proposed loop trail on the Kabetogama Peninsula of Voyageurs National Park that day with naturalist Frank Ackerman, who wanted to show me the difference between logged areas in the roadless, rocky terrain and some spots where bigger timber remained. Padding over the deep snow was a lovely way to get around, quiet and easy, like scuffing over the surface of life without disturbing what was underfoot. Until we came to deadfalls and thick tangles of brush. I had been confident about the expedition, having spent some time on snowshoes as a northerner, but a day-long cross-country skiing expedition would be a different experience; I'd never tried the new equipment.

"You'll enjoy it," he said. "There are places out there you can't get to except on skis or snowshoes. Probably won't see another person all day, once you get into the park."

I looked dubiously at the skinny cross-country skis, so nar-

row compared to my old pair of wooden downhill skis. Now, how would I manage on these? I'd willingly go anywhere, match skill with anyone on snowshoes or in a canoe, but I had little confidence about the morrow.

"These things are quite in demand now," the hardware-store man assured me. "We've got people coming up here all winter long to go cross-country skiing. It's like they said, the park is drawing more people all the time. I'm switching to those skis over there next year." They were even narrower.

As I left the friendly store I wondered about the attraction of the North Country. Here was a competent engineer who preferred to change occupations—taking a teaching job at much less pay rather than move away and transfer to a better position—just to stay near the North Woods. And it was not merely a matter of tolerating the long winter in order to enjoy the brief, brilliant temperate times. I shared this madness and could not explain it either, though my own home was a hundred miles away in the rolling hill country of the Minnesota north, not here on the stark, dramatic granite of the border lakes.

The morning dawned with a faint promise of sunshine amid uncertain temperatures. Maybe fifteen above? Twenty? It was a bit humid, making the cold penetrate clothes. Five of us gathered at the park's administrative offices just outside International Falls, longing for a bit more sleep and warmth but not admitting it. The park building was a modest, one-story wooden structure, temporary housing until the permanent building could be erected a few miles away on Black Bay of Rainy Lake. Frank Ackerman tried bustling around and being efficient, gathering equipment, maps and canteens, with indifferent success. Mary Lou Pearson, the International Falls schoolteacher who doubles as park historian, kept looking longingly at the warm building when she thought no one was watching. Bob Schultz, park ranger, just looked grim and sleepy, drawn into himself. Clayton Cabeen, who had been transferred to Voyageurs as its new administrative officer only three days before, was joining us on the spur of the moment to get his first look at the place, and was excited and full of questions.

"Will I be warm enough in these clothes? How much water should I take? Will we be gone all day?"

The hour-long drive from headquarters east to Ash River skirted the park boundaries through bare, snowcapped fields on what was once pine forest rooted in the glacial moraine. It

had been homesteaded after the logging, but farming was poor, and most people had found jobs in International Falls or in the woods for their primary income. Half the distance to Ash River, the road crossed the first granite ridge, and patches of spruce forest nudged toward the highway.

"Look at that mess!" I complained about highway construction that was broadening the two lanes to four. "That's the place where we picked blueberries last year!" I knew that the berries would come back after the turmoil of the work was done, and that the highway would accommodate the growing number of park visitors as well as local traffic, but I did not feel like being wise and gracious about the disruption. Deer were feeding among fallen trees and slashed branches by the wayside, looking to be in remarkably good condition for this late in winter. Ordinarily deer are scrawny and worn just before spring turns the brush and grasses green.

"That's easy food for them," Mary Lou commented. "Succulent." Her lovely Slovenian face had a drawn, worried look, and it seemed she was searching to find something good in the day. Anxious about keeping up once we began skiing? If so, she wasn't the only one.

We passed the turnoff to Kabetogama Lake, four or five miles away and out of sight. Last summer we had canoed there, putting out from the Wooden Frog State Campground, a rocky hill jutting into the clean, island-studded lake. Very old Norway pine towered over our tent, and a sheltered bay afforded fine swimming. Now the lake was covered with several feet of ice, and the ice in turn layered by about two feet of wind-compacted snow. The only sounds among the big trees would be a few chickadees and nuthatches, small gusts of wind whistling from the northwest, and the occasional booming and echoing of the lake ice as it contracted and expanded in preparation for the changing season. Last summer an unwanted concert from the blaring car radio of a group of swimmers had drowned out the calling of the loons on the lake. The radio did not diminish the beauty of the place, only our enjoyment of it.

The Ash River turnoff, inauspicious as country roads go, took me into an area I had not visited before. As a very young girl, my wife had come here with her family to pick blueberries. Hers is an Ojibway Indian family, and during lean years at her home on Leech Lake Reservation, about a hundred miles south, they came here to camp and berry. Local stores and resorts bought the fresh blueberries by the quart. The picking was hot work, and the youngsters were expected to

keep at it all day, and to carry the backpack crates several miles from the berry patches along an old railroad grade to the parked car.

"It was so hot, and we were so tired, that when we saw one of those cold, clear springs along the embankment, we'd jump in with our clothes on," she once told me. "By the time we'd come to the next spring, we'd be dry and hot again." On one such hike she and some young cousins fired their slingshots into the woods. A pebble hit a bear they did not know was there, and the angry animal came charging out of the brush seeming bigger than life to the frightened children, who took off at a run.

"I dropped my slingshot!" a cousin panted.

"Go back and get it if you want it so much," another yelled. "You're the one who hit the bear."

"I didn't mean to. I didn't know he was there."

They reached the car, and their parents, without having stopped for a cooling dip. The bear had given up the chase somewhere along the line—they had not bothered to look back. My wife didn't remember how much of the day's harvest had been spilled on the way, but she recalled that she still had the packing crate on her back. "I wouldn't have dared come without it," she said. "They would have sent me back for it."

The Ash River Trail curved and dipped, following the contours of the land over granite hills, along riverside marsh, leading toward Namakan Lake. When the big loggers came into this area less than 100 years ago, and most of them only 50 or 60 years ago, they followed the valley for the best access across the rough terrain.

The road crowded near the frozen river, then led to a small cluster of buildings and cabins, several hanging over the edge of the steep riverbank.

"These are the resorts?" I asked Frank, not believing that the sad, careworn structures were the ones that had been gerrymandered out of the park boundaries on the grounds that visitors would benefit from nearby facilities, and that the resorts would benefit from the visitors.

Frank said: "Most of them are not winterized, so they have a very short tourist season in the summer. It's a marginal business. Not enough to build up capital, which is what you need to offer modern, year-round lodgings."

The situation was full of ironies. *If* the resorters could modernize, there would be plenty of business now. Without the business, they could not hope to get the money. So



there the structures sat, squat, ugly and melancholy. Compounding the ironies, a number of resort owners just outside the park boundaries have been privately approaching park officials, offering to sell their holdings.

"Why doesn't the park buy them?" I asked Frank.

"We can't. They are outside the boundaries set by the legislation. There would have to be action by Congress before we could do that."

High hopes and expectations had gone into the exclusion of the Ash River, Kabetogama and Crane Lake resorts from the park. Like others, I had thought this was sound public land policy. Now, face to face with the tawdriness of it, I was no longer sure. Perhaps over the years . . . with small business loans. . . . Or some larger concern might buy them out, but then it could lead to another case of Muzak piped out over the wilderness. Would local zoning keep the activities of large concessionaires within reason, within ecological bounds?

We stopped along a row of mailboxes set cheek by jowl.

"We'll pick up Ingvald Stevens's mail, in case we get that far," Frank said blandly, though I caught quick, furtive glances between him, Mary Lou and Bob. They casually explained that Mr. Stevens was an old-timer, one of two living within the park the year around. As private holdings were being purchased by the Park Service, owners had the option of staying on in their homes or leaving. Most left, but 92-year-old Mr. Stevens chose to live out his years in the cabin on an island in Namakan Lake, skiing four miles one way to get his mail, chopping his firewood.

"He's a wonderful old man," Mary Lou said, "I've been interviewing him for his recollections. It's part of our oral history program."

We packed our lunches and canteens and put on our skis. I wore heavy corduroy knickers and thick wool kneesocks, the others wool pants, though Bob was lacing on some bilious green nylon puttees that slipped over the top of his boots and over his pants legs. I thought they looked old-fashioned and blinked at the iridescent green. We headed down the riverbank to follow Ash River out into the park.

Used to downhill skis, I braced myself for a quick slide down and a turn at the bottom. But the slide was slow, and at the bottom the skis refused to turn. I'd have to learn an entirely new technique this day.

We plodded along in single file. Tiny streaks of snow meandered over the bindings of the skis, across my shoes, and I no longer thought of Bob's puttees as anachronistic

footwear: They would keep the snow out of his shoes and feet, mine would be wet before long! I considered offering to trade one of my sandwiches for the use of the puttees, or maybe just one of them, but decided against it.

With a hellish roar two snowmobiles caught up with us, circled us wildly on the river ice like frantic dogs chasing their tails, lunged up the embankment and down again, and disappeared amid gas and oil fumes, the decibel level approaching sonic boom.

"We'll be away from them in a few minutes," Frank reassured me. "They'll be out on the lake ice, and we'll be going overland to Hoist Bay along the railroad grade."

Frank thinks that snowmobile manufacturers, by stressing power and speed, are sacrificing durability and dependability, and also pricing the vehicles out of the market. There once were more than a hundred snowmobile manufacturers, and now about half a dozen are left, while inventories of unsold units continue to grow. For some people in the North Country, snowmobiles are means of livelihood, transportation and survival. It seems a pity their manufacture and use have been diverted into a craze for speed, and that planned obsolescence prevents people on low incomes, who could have practical use for them, from buying and maintaining them.

Up on the old railroad embankment, I wondered whether this was the one my wife had hiked as a berry-picking youngster. Hot weather seemed light years away in the damp cold, and the wind had become more blustery, scudding grey clouds above our heads. Below our trail the rusted tops of ancient cars, deserted here many years ago, protruded through the ice and snow. Frank, Bob and summer-student helpers have been clearing such debris, but some remains to be dragged out and hauled away. It amazes me that people can so wantonly despoil a place of beauty. No wonder we have to have parks, with regulations and rangers, paid for with our taxes, if we want some beauty left. Incredible.

There were some good-sized Norway pine here and there, little trees when the logging was over, but formidable now at a hundred years and older. Mixed in were spruce, birch, poplar or aspen, tag alder and occasionally cedar, balsam and white pine. We had gone less than three miles when the brush crowded in over the embankment and we had to break trail.

We took turns breaking branches with our hands, shoving deadfalls out of the way. It was very slow going, and I wished for my trusty old snowshoes left behind in the car, or a short-handled ax. Better yet, both. We stopped to rest and



consult the map. It was past noon, we were nowhere near the lake yet. Should we turn back? Why were they asking me? I hadn't been here before and had no concept of how far we had to go once we came out on Namakan, and I said so.

"I haven't been here either," Frank confessed. He and Bob had often talked about this old railroad grade as a potential cross-country ski trail, and my visit was an opportunity to look it over. "We'll brush it out next summer," he promised. "Now that I've seen how overgrown it is."

I was reluctant to turn back before reaching the best part of the trip.

"We've only got another mile of this at most," I pleaded. "If we come out on the lake in an hour, we ought to be able to make the loop around to the next bay and go back up Ash River from there."

"All right," Frank agreed. "And if it gets too late, we can skip going all the way around past Stevens's place, and take the mail back to the mailbox."

Mary Lou still looked worried; she had kept up through the brush, though once or twice she had fallen, as had each of us. The snow was too deep to do without the skis, and the brush too thick for easy progress. Bob and I were breaking trail, certain we were nearing the lake, when Mary Lou fell again and this time had to take a considerable rest before continuing.

"Maybe we ought to take the shortest way back," I suggested.

"She really wants to go on," Frank said. "Let's see how it goes."

The brush thinned, and on an open stretch of grade beginning the downhill slope to the lake we crossed otter tracks in the snow. Then we were in a clearing among resort cabins

now used by the Park Service as a summer work camp. We took another look at the map. Stevens's cabin was still several miles away. If we omitted the side trip to his place, we would get back to our cars by late afternoon. If we went all the way, it would be dusk or later. It seemed unneighborly to me not to visit the old man living by himself and do him the courtesy of dropping off his accumulated mail. But I was also concerned about Mary Lou, who did not look at all well.

"If we take the short loop, we'll be turning left about a mile and a half up the bay," I said. "We've got to go that way anyhow, it will be faster than going back through the brush. Maybe two of us can go all the way to Stevens's, and the other two can take Mary Lou back to the car."

We ate quickly in the shelter of one of the buildings, our skis stuck in the deep snow while we stamped our feet and tried not to let on that we were cold. Then we followed the slope of the land down to the lake ice, over the frost heaves of the ice, and out onto Namakan Lake. Trestle timbers, weathering and rotting, dotted out into the lake, protruding above the ice in uneven, serried patterns, and then stopped. This was where the logging railroad had ended, scooping up the great pines from the log booms. The shoreline was granite topped by new forest, the dramatic, beautiful North Country looking as it did when the voyageurs were here, and the fur traders and my wife's ancestors.

The narrow skis slipped and scudded over the uneven snow, occasionally pressing down an inch or two where the wind was whipping flakes into tiny dunes. I was becoming used to the feel of the skis, getting some slide and rhythm. We passed the turnoff to Moose Bay, which was the shortcut back, and everyone went on, Mary Lou deciding that even if she brought up the rear, she would come nevertheless.

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A mile, another, then around the headland with clusters of granite islands—I caught a faint whiff of smoke in the numbing wind.

“He’s burning popple,” I said. Frank grinned broadly. We could not see the cabin yet. Then the log outbuildings came into view and, soon after, the cabin, with windblown white smoke coming from the chimney.

We tramped up the path to the house, saw the old man through the windows as he sat at a desk, writing. He did not see or hear us, and we had to knock hard several times before he came to let us in.

“I didn’t expect you anymore!” he said. “It got so late. . . I called into town, and they said you were coming, but when it got so late. . .” There were tears in his eyes. Old age? Emotion? He was a thin, ramrod-backed man with white hair and bright blue eyes. There was stubble on his face and he looked emaciated, sallow. I didn’t know he’d been expecting us.

Mary Lou hugged him, looked at him closely, then hugged him again.

“Are you all right?” she asked.

“Better. I’ve been sick three days, couldn’t hold down any food. I couldn’t stand up or walk, I had to crawl out to the shed to get firewood. That’s why I called. I thought I had a heart attack. But I’m all right now, just weak.”

She obviously cared deeply about Ingvald Stevens. It went far beyond obtaining interesting interviews for the oral history collection. The proud, self-sufficient recluse who declined all offers of assistance had been helpless and telephoned her, and that was why she had come, pushing herself beyond fatigue, afraid we might be too late. Even when he was very ill and uncomfortable, Mr. Stevens had not accepted

the suggestion that a resort operator be sent out on a snowmobile to check on him. But if Mary Lou could come. . .

“I was so relieved when we smelled the smoke,” Frank told me later on the way back in. “That’s when I knew he was still alive. I expected to find him dead.”

“Why didn’t you tell me?” I asked.

“We didn’t know if we could get all the way to his place, and we didn’t want to worry you.”

We hauled firewood, did chores, and made sure Stevens was able to care for himself. A snowmobile was sent from an Ash River resort to bring Mary Lou back in. The rest of us skied. It was sunset as we plodded over the lake, getting colder and windier, and I pulled the ski goggles out of my jacket pocket to shield my eyes from the sandy, driven snow grains blowing almost horizontally across the ice. The sunset colors filtering through the clouds tinted the landscape and some of the overcast mauve, light gold and beige.

As we had left Ingvald Stevens, I thought the winter must seem long to him. It does to all of us, despite our year-round love of the North. Even a self-reliant, self-disciplined man who has chosen to live by himself, maintaining a meticulous notebook and diaries and going on skis for his mail, must relish the coming of yet another spring. So at the door I had said: “I saw a bald eagle today. They’re back. He was sitting in a treetop. Very close.”

“A bald eagle! That’s good! It’ll be spring soon when the bald eagles return,” Ingvald Stevens had said, his eyes no longer watery, but bright and smiling as he saw us off. □

Robert Treuer is a free-lance writer living near Bemidji, Minnesota. This excerpt from his book Voyageur Country is published with the permission of the University of Minnesota Press.

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Rising From the Ashes

After the Santa Monicas Blaze

Text and Photographs by
JAMES P. KENNEY

Fire! A raging inferno races through canyons and up the slopes of the Santa Monica Mountains. The familiar Southern California story repeated itself in the fall of 1978, as it will again. The media reported death and destruction, but the aftermath of the Santa Monica Mountains fire was also a time of rebirth and rejuvenation.

The Santa Monicas are surprisingly rugged, considering they have a maximum 3100-foot elevation. Sheer cliff faces and steep canyons with spectacular waterfalls make a day hike an unexpected adventure. The terrain is predominantly chaparral-covered slopes, but throughout the range's 50-mile length there are riparian woodlands, oak groves, grassy meadows and rolling hills of sage and buckwheat, the whole enhanced by ocean fogs in late spring and early summer. The climate is Mediterranean, characterized by long summer drought and by minimal winter rainfall that averages fifteen to twenty inches a year.

The flora of the Santa Monica Mountains, evolving over thousands of years, has adapted to this periodic lack of moisture in a number of ways. The root systems of such large shrubs as scrub oak and chamise reach down 30 feet and more. The leaf design of most plants minimizes the water lost through transpiration, and moisture from every source is

absorbed—from fog as well as rain. The resulting plant life, naturally, is a harmonious grouping of species that have survived the difficult conditions for millennia; what's astounding is that fire is the key to their survival.

Chaparral appears from a distance to be a velvety collection of similar plants whose main difference from each other is their varying shades of green. A closer

look reveals what the cross-country hiker already knows: The dense shrub is a multitude of species that reach heights of more than fifteen feet and have impenetrable, twisting branches, some with menacing spines. Adjacent plants grow together, interlocked, so that only small mammals and reptiles can enter.

After twenty years, the plant community is so crowded that its health is threatened. Some of the standing vegetation is dead and dry. Debris has accumulated under the branches, the soil has been gradually depleted of nutrients, and open space for new growth is almost nonexistent. Fire solves these problems in a matter of moments.

What people fear, the mountains require to begin a cycle once again. When the hot winds of Southern California reach the combustible dry grasses and foliage at the peak of the fall drought, fires are inevitable.

How do fires begin? We often suspect human causes—accidents or arson—but fires have been occurring since long before human habitation. Obvious natural causes, such as lightning, were probably a greater factor in prehistoric times; lightning from thunderstorms started fires at higher elevations inland that must have raged for many weeks, eventually reaching lower, coastal ranges before arriving at the ultimate firebreak, the



Pacific Ocean. Some investigators offer evidence of friction-induced fires, begun by, for example, falling rocks. Others mention the spontaneous-combustion theory; the interesting but unproven possibility that fires start from the heat of decomposition, the by-product of the chemical and bacterial action upon debris that also occurs in the composting bin.

Regardless of the cause, when the temperature is high, the humidity low and the winds strong, conditions are right for a major fire. Temperatures can reach 1200° F and flames can soar to heights of almost 200 feet. Nothing in the fire's path will be spared until the winds decrease or, as in the case of the Agoura-Malibu blaze of 1978, the fire meets the sea.

Coming upon a newly burned site while embers are still smoldering is visually surreal. The ash in some areas is chalky white and a foot deep. Larger shrubs such as toyon, ceanothus and laurel sumac are symmetrical, branched silhouettes against a background of grey and black. The quiet of the moon-like landscape is broken only by the slight hissing of a still-burning stump and the occasional sound of a charred limb falling to the ground. The smell of a burn site is an overpowering blend of smoke and ash that is never forgotten.

A month after the November 1977 Santa Monica Mountains fire in upper Santa Ynez Canyon, the seasonal rains began. The storms continued until late

spring, bringing more precipitation than had fallen in 40 years. The early months of 1978 were spectacular; the rare combination of fire followed by plentiful rain was to create a display of new growth and flowering not seen for decades.

Chaparral shrubs recover from fire either by stump-sprouting or by seed production. Like laurel sumac, with its scarlet new leaves, most shrubs begin their recovery from a charred stump or burl within three weeks after a fire—because of their extensive root systems, the larger



shrubs begin growing even before the rains begin. The new growth inches upward in December but is soon hidden as the first winter showers bring mass germination of annuals and perennials that cover every hillside, ridge and canyon. Wildflower seeds that have lain dormant for decades suddenly have light, space and nutrients. Some seeds actually require fire to germinate; only by being subjected to high temperatures can their seed coatings become permeable to mois-



Opposite, above: In late 1977, fire once again struck the Santa Monica Mountains. Below: The fire poppy will germinate only after a fire. This page, left: The apparent desolation caused by the fire; the ash was more than a foot deep in places. Middle: Only a month later, the process of revegetation had already begun, laurel sumac was the first plant to sprout from the stumps of burned ashes. Top: By April a proliferation of wildflowers and grasses had transformed the scene.

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ture. Other species, seen only rarely in normal years, soon number in the thousands. The flowering season becomes a spectacle of luxuriant beauty.

Each area of the Santa Monicas responds differently to the effects of fire; slope direction, proximity to the ocean, elevation and type of terrain all contribute to the diversity of the plant life that emerges in the winter and spring. One of the first signs of life after the 1977 fire was the snake-like man-root, or wild cucumber, a twining vine that speedily draped itself over and through naked shrub branches that had not yet collapsed. The white man-root flowers in December were the first of the season. By March the vine produced enormous oblong seed capsules, covered with spines and hanging from blackened limbs like Christmas-tree ornaments.

Soap plants, members of the lily family that don't bloom until late May, are not common in the Santa Monicas. Now, however, they were the first bulbs to emerge as winter began; their wavy, bright green leaves would soon go unnoticed in a covering of annual seedlings. But in May and June thousands of eight-to ten-foot stems with waving panicles of white flowers would be the dominant sight as other plants began to decline. There are nearly twenty other members of the lily family in the mountains; wild onions, zyadenes and blue dicks appear at early intervals, followed later by three different Mariposa lilies. In June the stately Humboldt lily, with as many as 40 orange flowers on a single stalk, hugs the banks of the running streams.

Santa Monica Mountains

When the Omnibus Parks bill passed, the Santa Monica Mountains National Recreation Area (SMMNRA) got a legislative mandate and an authorization of \$155 million. Congressman Anthony Beilenson (D-West Los Angeles) secured \$35 million for the first year's operations, enabling the National Park Service to begin land acquisition. And the Park Service has begun; staffing, acquisition and boundary planning for the new national recreation area are moving swiftly.

Yet despite the Park Service's commitment and strong support from hundreds of thousands of citizens, the city and county of Los Angeles refuse to protect the designated lands. Subdivisions there are routinely approved (as though steep slopes, flood and fire hazards and geologic insta-

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By mid-February a pattern was becoming clear: Millions of seeds had germinated at approximately the same time, but blooming periods occurred in waves. One of the first plants to appear in January was the scarlet larkspur, a perennial that would not flower until June. Next to it sprouted skullcap, a March-blooming, low-growing member of the mint family. One nine-square-foot area had as many as twenty different species that would bloom in succession as the season progressed. Generally, the shorter species, such as lupine, would flower first, followed by medium-sized monkeyflower and gilia. Finally, as summer approached, the taller phacelias, snapdragons and clarkias would rise above their withering neighbors.

Late March began the dazzling wildflower blooms. Hillsides of collinsia were so bright as to be almost blinding. Slopes covered with the magenta spiny lupine were found next to similar slopes ablaze with the golden yellow of the California poppy. Intermingled with the poppies were the lace-pod, a fascinating member of the mustard family; this annual's charm is not in its insignificant white flowers but in its translucent seed pods, arranged delicately on stems along a central stalk.

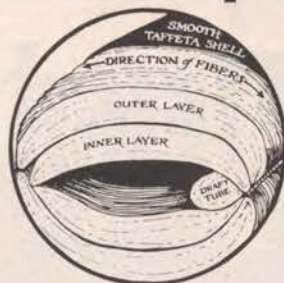
In contrast to the hillsides of brilliant colors were scenes of quieter discovery. One mid-April morning there appeared among the taller grasses a single fire poppy. This red-orange annual will bloom only after a fire, and rarely ever in great numbers. Though it resembles the Iceland poppy so popular in Southern

National Recreation Area

bility do not exist); federal commitments and funding are ignored. The California Department of Parks and Recreation has requested and received approval of a major road-widening project on a significant Indian burial site.

The great hope of the SMMNRA supporters lies in the courts, which could stop major subdivisions before the recreation area can be established. To gain the time needed for the courts to act, the Los Angeles County Board of Supervisors should create a mechanism (such as an interim protection period) to assure that the integrity of the allotted 212,000 acres will be preserved. Letters should be sent to the Los Angeles County Board of Supervisors, 500 W. Temple St., Los Angeles, CA 90012. □

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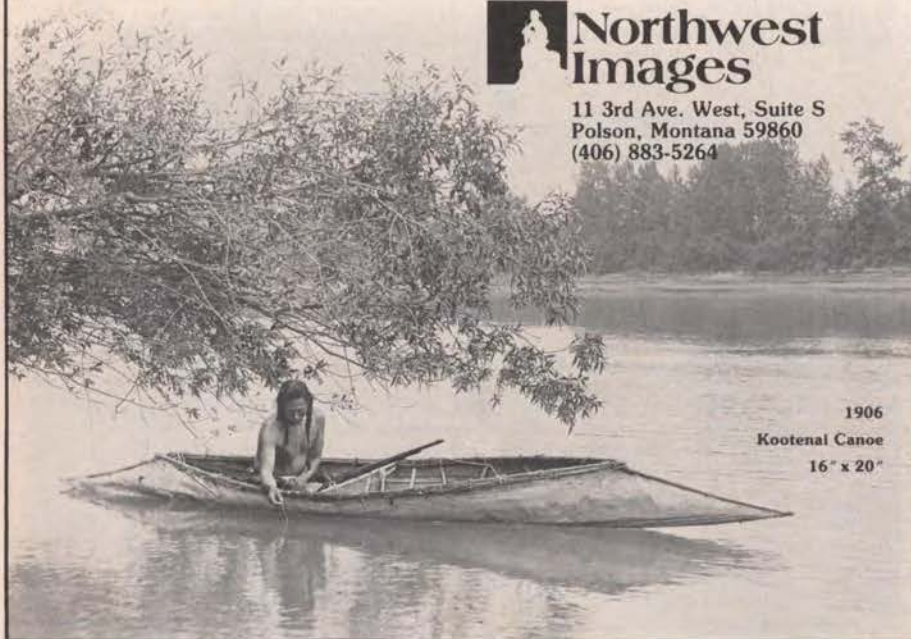
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California gardens, its smaller blossom is more graceful, the more so for its rarity and solitude.

In the beginning of March fresh deer tracks could be seen in the damp soil. Larger mammals and birds usually escape a chaparral fire, though a deer can become frightened and trapped in once-familiar escapeways now blocked by residential development. Mule deer cannot penetrate the older stands of chaparral, but the tender young sprouts and seedlings that grow after a fire provide a feast for them that lasts the entire year. Although the rat population is greatly reduced in a burn area, burrowing rodents have a greater chance for survival; only a few inches of soil will protect them from the heat. There were fresh gopher diggings the day after the November 1977 fire—direct evidence of earth's protective insulation.

Excepting fireroads, and other human encroachment, even the severest of storms in the 1977-1978 rainy season caused little destruction. Avalanches and rockslides occurred along every fireroad, but nature has designed mountains so that natural runoff follows a succession of pathways coursing from ridgetop to canyon bottom with minimal erosion. Soil and rocks are carried by engorged streams, but in a harmonious cycle that has continued for thousands of years. When slopes are burned over and exposed, they do not automatically surrender their surface layers to each succeeding storm. In the natural recovery process, the ash created by fire forms a water-repellent crust; without it, native seeds beneath would easily be washed away.

By late May the panorama had changed from green to gold, but streams that had not carried a drop of water for years were still running. Fading early-spring bloomers had been replaced by taller plants such as *Phacelia grandiflora*, a robust representative of one of California's largest genera. With its large purple or blue flowers, this phacelia was the most dominant of all the fire-followers. In late spring its blossoms completely covered all habitats, from streamside areas to rocky cliffs. Finally, in June, the drying slopes showed isolated patches of bright red where fifteen-foot spires of scarlet larkspur provided a last burst of color, an appropriate ending to a glorious season. □

James P. Kenney is a free-lance writer and photographer, and a member of the Angeles Chapter's Santa Monica Mountains Task Force.



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On Developing Clout

CARL POPE

WITH FOREIGN POLICY dominating the headlines, it has become difficult for the public to discern the environmental stances of the various presidential candidates. Here, then, is a selection of the candidates' recent actions and comments, offered for the guidance of Sierra Club members.

Many candidates have as yet said little about environmental issues; former California Governor Ronald Reagan, for example, has said almost nothing to indicate whether his views have changed since his 1976 presidential campaign. The politicians' cursory treatment of environmental issues thus far is particularly telling because so many matters of national importance are intrinsically environmental: energy, wilderness, toxic wastes, the management of public lands—the list goes on and on. But it is up to environmentalists to make these issues politically vital to the candidates.

Many activists will be surprised to learn that the Sierra Club has enough members to make the environmental questions crucial to the 1980 campaigns. Only about 10,000 people in the nation are actively involved in one or another presidential campaign. This figure is a small fraction of the number of Club members, and an even smaller fraction of the number of friends, colleagues and relatives that Sierra Club members can influence.

This year's caucuses and primaries will help set the political agenda not only for the campaign, but for the next four years—and possibly for the entire decade. If Sierra Club members wait for an ideal candidate to emerge, other interests will take center stage and determine the election's outcome. For the election, and especially for the coming years, it is more important that environmental issues become central and that environmentalists become key political activists than that any particular candidate wins or loses.

The capsule summaries that follow may, if you wish, be filed away until election day in your state. But if you do forget them now, there is a real danger that you will end up trundling to the polls to choose among candidates, none of whom have taken clear stands on the need for environmental protection.

What you can do instead is use these brief analyses in designing your own personal strategy for influencing the next President's environmental stance. The following descriptions (listed alphabetically) are not exhaustive profiles of the candidates; it is too soon in the campaign and space is too short. These thumbnail sketches are intended to give a brief background on the candidates' past stances on environmental issues.



JOHN ANDERSON (R) Representative Anderson has a fair environmental voting record. His League of Conservation Voters (LCV) rating over the past three years averages 46% (indicating environmentally favorable votes on 46% of the bills directly affecting the environment). Anderson also has a record of strong leadership for the Alaska legislation that environmentalists have favored, bringing with him crucial Republican votes. His campaign features a proposed 50¢-a-gallon tax on gasoline; the proceeds would be used to reduce social-security taxes by half. The tax proposal draws strong support from environmentalists. In the Iowa debate, Anderson was the only Republican candidate to make energy conservation the focus of his remarks. He has modified his earlier, generally favorable stance on nuclear power; he now opposes licensing or constructing new plants until safety issues are resolved.



HOWARD BAKER (R) Senator Baker's four-year LCV average is 29, well below the overall average. Conservationists were extremely upset last year—with Baker's tactics as well as his objectives—when he single-handedly forced an override of the Endangered Species Act to allow the filling of the Tellico Dam reservoir. Though Baker adopted an environmental position on pollution legislation within the Senate Environment Committee, he has said little about environmental issues so far.



JERRY BROWN (D) When California Governor Brown ran for reelection in 1978, conservationists said "his administration has compiled one of the best overall conservation records of any state administration in American history." But conservationists have also felt that Brown has often failed to follow through on his rhetoric. Many doubts have been allayed in the

past three months: Brown's energy agencies have completed a sweeping set of changes in state energy policy that put California directly on the soft-energy path and show that neither development of nuclear energy nor massive quantities of coal are required to meet energy needs for the rest of this century. Brown features environmental issues in his campaign, emphasizing his anti-nuclear stance.



GEORGE BUSH (R) A decade ago, Bush had an LCV rating of 50% in the House of Representatives; he now enjoys the support of many Republican conservationists. But Bush is also wooing votes from Westerners with vested interests in poor management of the nation's public lands. He favors continued development of nuclear power and synfuels and increased use of coal. There is little evidence that Bush intends to compete with Anderson for the environmental vote.



JIMMY CARTER (D) The President appears to be trying to rebuild his support from environmentalists, who applauded the withdrawal of 40 million acres for Alaskan wildlife refuges by Interior Secretary Cecil Andrus. Carter originally lobbied for a strong, anti-environmental Energy Mobilization Board, but lately his

administration has stressed minimizing the power of the EMB to override environmental laws. The Carter Administration opposes the wasteful water-projects bill approved by the House and, at press time, seemed poised for a veto. Carter is expected to oppose anti-wilderness legislation, and he has considered reducing federal subsidies for developments that threaten barrier island ecosystems. However, Carter continues to support nuclear power. His State of the Union message disappointed conservationists; he failed to make progress on either wilderness preservation or energy. He also rejected proposals to allow states to veto nuclear-waste disposal within their borders. And Carter rejected effective gasoline-conservation strategies, such as rationing or higher taxation. Carter, then, continues to take stands that are less environmentally favorable than either of his Democratic rivals, but after some recent errors—signing the Tellico Dam bill, approving RARE II and failing to adopt an acceptable energy policy—appears to be improving.



JOHN CONNALLY (R) Governor Connally has established himself as the foremost advocate of the hard energy path. In the Iowa debate, he spoke for nuclear and synthetic fuels as the only feasible energy options for the remainder of this century. Connally also asserted that economical renewable-energy resources are, without exception, far off in the future—a belief environmentalists refute. He has also cloaked his campaign in rhetorical opposition to environmental regulations, strongly signalling that he seeks support from polluting industries.

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EDWARD KENNEDY (D) Kennedy had the highest LCV rating in 1978 of any senator—96%. He has continued to attack Carter's stance on nuclear energy, charging that new plants would not reduce oil imports and that Carter's response to the Three Mile Island Commission report short-changes safety considerations.

Kennedy has joined Brown in advocating gasoline rationing. He has also supported giving the states (particularly in the West) a larger voice in determining the energy and water policies that will affect them. His opposition to Carter's push for a synfuels industry received high marks from conservationists. But Kennedy has opposed efforts by Cecil Andrus to reserve water rights to the federal government—efforts supported by conservationists in order to preserve water levels needed by fish and wildlife. (Kennedy pointed out in a recent meeting with environmentalists that the federal government could also use the water for energy purposes.)



RONALD REAGAN (R) Reagan's record as governor of California could be used to attract the support of environmentalists, but Reagan seems uninterested in this aspect of his campaign. His statements have been confined largely to foreign policy and to the economy. In his 1976 campaign, his overall LCV rating was

"bad." Reagan has commented that energy conservation is low on his priority list: "At best [conservation] means we will run out of energy a little more slowly."

Here are some ideas on how to develop a personal strategy for influencing presidential politics in 1980:

- Do you already have clear preferences for particular candidates? If so, let them know that you support them, indicate that you are a conservationist, and give the environmentally related reasons for your support. Too often, candidates underestimate conservationists' political involvement because we neglect to tell them who we are, and that we are involved because of our concern for the environment.
- When you are approached by candidates you don't support, point out to them the inadequacies you see in their environmental positions, and let them know that these inadequacies are the reason you're not giving support. If you get a fund-raising letter from a politician whose position on wilderness or energy you don't like, send back the letter with the notation on it that "I won't support you because of your stand on environmental issues, particularly _____. You should be working for _____ instead."
- Make political contributions to the presidential or congressional candidates of your choice, or to SCOPE, the Sierra Club's Committee on Political Education. You can take a federal tax credit of 50% for contributions of up to \$50. And in Oregon, Idaho, the District of Columbia and Alaska you can also take a state tax credit—regardless of your income bracket or whether you itemize deductions on your tax return. When you make a contribution, let the candidate know that his or her environmental stands are the reason for your gift.

Continued on page 46



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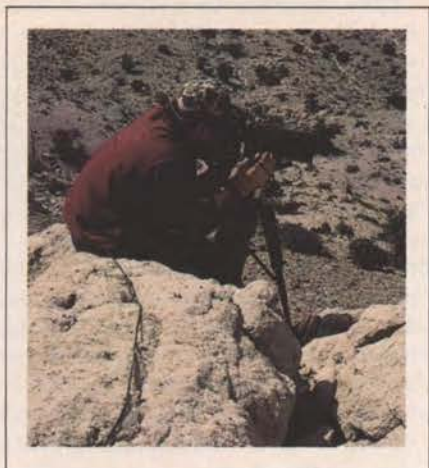
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An Expert Wildlife Photographer Discusses His Craft



Sandraime Blake

Wildlife and the Lens

Text and Photographs by
TUPPER ANSEL BLAKE

SINCE FIRST LIGHT, black clouds had been building up, pushed closer and closer together by a constant wind from the south. It was fall on the coast of Northern California, just before the first rain and storm of the season. My neighbors might relax before a comfortable fire and await the arrival of rain upon their roof, but I gathered my cameras and headed outside. I still had some time before the storm would hit, and I knew exactly where I wanted to go.

I hiked to a meadow surrounded by a Douglas-fir forest and prowled around the "edge," the zone where the forest and meadow meet.

When the first heavy rains come down, rodents leave low ground and move toward higher terrain that won't be flooded. As rodent activity increases, so does that of rodent predators—bobcats and foxes, for example, and raptors such as hawks and owls.

I sat down in front of a large tree (to avoid a silhouette) in a spot commanding a view of the surrounding meadow as well as of a couple of snags a raptor might land on. As time slowly passed, I checked the direction of the wind, making certain it was not blowing my scent where I hoped a fox or bobcat might be

hunting. Mammals have great senses of smell. I also kept my movements slow and deliberate; fast movement surely would be detected by the keen eyes of hawks or owls.

A magnificent adult great horned owl glided silently out of the forest and landed on a branch that afforded an unobstructed view of the meadow and the movements of rodents. I was ready that day, and I was rewarded with some excellent wildlife photographs.

In wildlife photography, there are many instances when no exposures are possible; the photographer of wild animals does not have control of his subjects. The essence of successful wildlife photography is not, after all, technical excellence; it is understanding the behavior and traits of animals. The photographer pursues the wild in the wild and must think as does the quarry, adapting to the time frame of the particular bird or mammal. Patience in wildlife photography is not only a virtue, but a necessity.

Wildlife photography has aims beyond making spectacular photographs. It can be, for example, a tool for field biologists in their research; behavior so rapid that the human eye can't perceive it can be frozen on film for further study. And the art can

be used for quite different effect. A wildlife portrait may evoke so intense a perception of the animal that it instills in the viewer a concern for the needs of wildlife.

First, however, the wildlife photographer must understand the traits and habits of wildlife. Each species' use of sight, hearing and smell is idiosyncratic, and an understanding of it can be put to good use. Novices may wonder why a hawk will fly from its perch when the photographer is still a long, safe distance away. The answer is that birds of prey have excellent vision; the eyesight of some is eight times keener than humans'.

A close look at the physical features of a particular species helps reveal which senses are paramount. It is a wise photographer who, noticing a deer's large, rotating ears, realizes the animal relies heavily on its sense of hearing, and that successful stalking must be silent.

How close to wildlife can a photographer get? This often-asked question has no pat answer; each species sets up invisible perimeters and brooks no intrusion. Each species has its own spatial boundaries that vary throughout the year, depending on the stage of the animals' life cycles.





If you are stalking wildlife, in the eyes of your subject you are acting as a predator. Animals are intensely sensitive to the movements of all things around them. Certain actions—such as a sudden motion, a head-on stare or looking down on your subjects from above—they associate with predators and so instinctively avoid. Bighorn sheep, for example, should be approached from low ground, and the photographer should adopt a grazing posture, taking care always to remain in the herd's field of vision. Hiding from a herd and then suddenly appearing above them, staring down at them, may bring a photographer closer to the bighorns, but the sheep will remain in the viewfinder for only a fleeting moment. Bighorn sheep may not be wise to the ways of a wildlife photographer, but they are wise to the ways of a mountain lion.

There are times, though, when a "sneak" or surprise stalk is in order. In these instances, the photographer should avoid being silhouetted and should take advantage of natural objects (trees, rock outcroppings) and natural conditions (shadows, early-morning darkness) as cover. The ability to freeze at a small sound is essential.

Be aware of wind direction; your scent

can signal your presence long before you can be seen. Reducing your scent is wise. Remember, though, that the fancy soaps, perfumes and colognes advertised to draw humans together don't appeal to

Opposite: The wildlife photographer in his natural habitat.

This page: a selection of California wildlife. From left: A blacktail deer, a nest of ospreys, a valley pocket gopher. Below: A young prairie falcon.

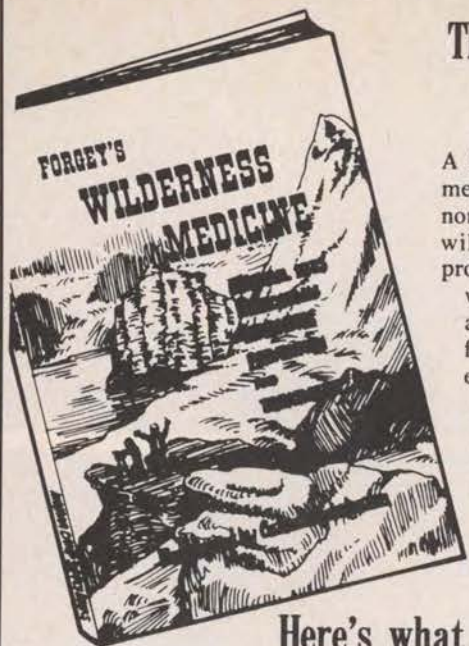


elk, coyotes or bears. To reduce the obtrusiveness of equipment, reduce its glare. Shiny chrome should be taped or painted dull black, brown or green.

Besides stalking wildlife, a photographer can simply wait for it to appear. To photograph some species, just sit patiently in the open—shorebirds, for example, skitter away at your approach but return to feed and to move around you after you have remained motionless for some time. With other species, a blind is necessary. The blind may be fancy or simple, premade or improvised with natural materials found in the area. For maximum photographic opportunities, a blind should be placed near areas of high use by wildlife; animal trails, nest sites, den sites, water or food sources and migration routes are all likely locations.

Whether waiting or stalking, the really effective photographer will use tracks and signs to help locate animals. (See "Tracks and Signs," January/February 1979.)

Though wildlife photography can be a harmless pursuit, there are potential dangers for both photographer and subject. Defending territory and young is extremely important to all species, and wild animals will bring grief to the human



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who oversteps their bounds in the quest for photographs. Bears with their sharp teeth and claws, elk and moose with their antlers and hooves, and hawks and owls with their talons can be deadly.

The dangers photographers pose to wildlife are equally real. If only one working rule is remembered, let it be that photographers must always consider the subject's welfare first. Mere human presence can be disrupting. To wait so near a desert waterhole, for example, that all wildlife refuses to drink is thoughtless and cruel to the animals and birds—as well as a waste of time for the photographer.

In keeping with that rule, vegetation should never be disturbed for the sake of a photograph. You may someday find yourself one branch away from a great shot of a nest site. If you saw or break off that limb, you may get the picture, but you may also let in unwanted (from the bird's point of view) sunlight and so dangerously increase nest temperature. The absence of one limb may also expose a cleverly hidden nest to predators; either effect can bring death to the young. Better to bring a rope, tie the branch out of the way for a few moments, take your pictures and quickly return the vegetation to its original position. Sometimes it is wiser to give up a photo attempt, leave the area, and hope for a less touchy setting another time.

Another hazard is regular and repeated trips to photograph, for example, a ground-nesting bird and her young in a marsh. This will leave not only a well-defined trail but also a human scent. Foxes, bobcats or raccoons will soon take advantage of the markers you have left, and one crisp morning you will find feathers, not family, to photograph.

Most wildlife photographers are aware that the Endangered Species Act makes it a federal offense to disturb or to harm in any way a species that is endangered. Yes, the law even applies to people who want only to photograph that species, yet who, in the process, cause disturbance or harm.

Aside from keeping the interests of the wildlife always in mind, there is no fixed set of rules that apply. The photographer must continually experiment, improvise and think ahead. What is constant, however, is the joy that wildlife photography brings to those who attempt to capture wild animals on film. □

Tupper Ansel Blake is a photographer, writer and naturalist specializing in birds and mammals of North America.



Mt. Shasta: Where It Stands

STEVEN R. JOHNSON

MT. SHASTA should be kept as a pristine area." With these words, John Seiberling, chairman of the House Public Lands Subcommittee, summarized his views after a two-day congressional hearing last summer on preserving Mt. Shasta. Seiberling's statement came as a welcome surprise to members of the Mount Shasta Resource Council (MSRC), a local group that has been working for Mt. Shasta's protection since 1974. Unfortunately, the chairman's views are not shared by Senator Alan Cranston (D-California) and Representative Harold T. "Bizz" Johnson (D-California), who submitted identical Mt. Shasta wilderness bills last spring (S.B. 813 and H.R. 5586). They were the first post-RARE-II wilderness bills in the nation.

These classic "rock and ice" bills are seriously deficient in many ways. They would provide wilderness designation for only 25,980 acres of the 39,030-acre wilderness study area. Furthermore, the bills would allow Ski Shasta Corporation to proceed with its plans to develop the mountain's southwest slopes, near the Sierra Club's Shasta Alpine Lodge.

Controversy over the location of a ski area on Mt. Shasta has subverted the issue of wilderness preservation for nearly six years, but it is a question that must be dealt with. Carl McConnell, who was a major stockholder in the Yosemite business concession before selling to the Music Corporation of America, is the current owner of Ski Shasta. He wants to close the existing ski area and open a new one in the Sand Flat/section 30 area, a proposal opposed by many skiers and most environmentalists. Section 30 contains the largest and one of the last climax stands of virgin Shasta red fir remaining on Mt. Shasta. The area is already used

for cross-country skiing, hiking and camping. Professional skiers argue convincingly that many of the problems plaguing the current ski site, such as high winds, southerly exposure, whiteouts and avalanches, would also affect the Sand Flat/section 30 area. Nevertheless, McConnell is willing to spend \$9 million on his proposed development, and he is supported by the ski industry, various chambers of commerce and others. More important, he has successfully convinced a large segment of the public and their legislators that he is the skiing savior of Northern California.

Nothing could be further from the truth. There are many potential ski development sites north of the Tahoe basin in California. At present, two of them have financial backing and are endorsed by environmental groups. The first such proposal is simply to expand the existing ski area below timberline, into Grey Butte. However, McConnell holds the only Special Use Permit for the area, and the Forest Service recently granted him permission to keep it closed for a second year, thereby preventing anyone else from developing the area. (Ski Shasta's above-timberline Green Butte chairlift was damaged by an avalanche in January of 1977. The ski area has been closed since April of that year.) The matter has become even more complex; the Forest Service has postponed further study of alternative ski sites on the mountain until after Congress votes on the Mt. Shasta wilderness bills. If Congress deletes section 30 from wilderness, the Forest Service will probably acquiesce to McConnell's ski plans. One recourse left to those who oppose development in the Sand Flat/section 30 area would be a lawsuit over the Forest Service's environmental impact statement.

Representative Johnson has openly supported Ski Shasta, but Cranston has not—even though his bill is essentially a

rubber stamp of McConnell's proposal. Last year, Senator Cranston, California Resources Secretary Huey Johnson and Regional Forester Zane G. Smith announced joint guidelines for future California ski development. Two primary goals were to expand "existing facilities rather than establish new facilities" and to provide new ski developments "in localities that minimize environmental conflict." Expansion of present Ski Shasta facilities and development of Whaleback follow these guidelines; the Ski Shasta relocation plant maximizes environmental conflict. Apparently Senator Cranston is feeling the pressure from the Far West Ski Association and other ski-industry lobbying groups concerning not only Mt. Shasta but also Mineral King—he has supported "limited" skiing there. Only Huey Johnson seems intent on seriously following the guidelines and protecting maximum wilderness on Mt. Shasta.

Environmentally sound ski development and maximum wilderness designation are two of MSRC's goals. A third objective is a Mt. Shasta national-park study. MSRC has proposed that approximately 200,000 acres be studied for possible inclusion in the national park and/or recreation area system and more than 9000 signatures have been gathered in support of such a study. A sixteen-page *Mt. Shasta National Park Draft Proposal* includes a brief summary of the 100-year history of attempts to establish a Mt. Shasta National Park (the first was initiated by John Muir), the reasons for creating a national park there, and site-specific locations for trails, roads, vista points and headquarters. The proposal is available for \$1.00 from the Mount Shasta Resource Council, P.O. Box 829, Mt. Shasta, CA 96067. □

Steven R. Johnson is a ski instructor and member of the Mt. Shasta Resources Council.

Cycles in Cities

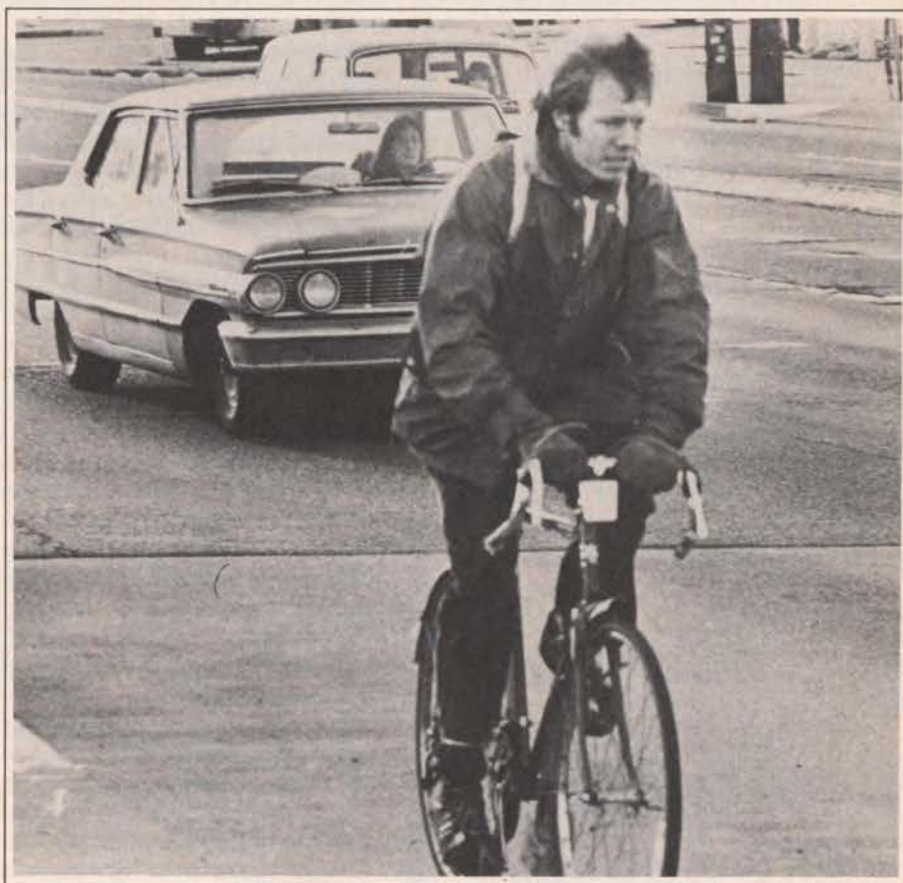
PETER HARNIK

IT'S 8:50 A.M., and I'm riding my bicycle amid a sea of commuters down Connecticut Avenue, one of the principal streets in our nation's capital. Many of the drivers around me are late for work and, because they've driven the road hundreds of times, they know how to maintain a fast pace despite the mere inches to spare on every side.

At California Street the avenue widens to three generous lanes and plunges down the final hill to center city. I pick up speed down the slope, keeping abreast of the cars now, my hair blowing and shirt-sleeves flapping in the wind. Ahead of us a bus is stopped, its front end near the curb, its rear end protruding into the traffic lane. Cars are squeezing left, and I glance behind me to check whether I can momentarily fit between two of them. If I can make it past the bus, I'll be able to hit top speed and catch every green light to Dupont Circle. If I can't squeeze by, I'll be forced to skid to a stop, stand behind the bus's exhaust pipe for 30 seconds and hit red lights for the rest of my trip.

I wince at the choice, but already it's too late to stop. Somehow I'll fit. I'm tense, but another split-second glance reassures me a bit. The green Pinto four feet behind and to the left is driven by a motherly-looking woman with Maryland plates (a commuter) and a plastic Jesus on the dash. That *has* to count for something, I figure; she'll probably let me in. Even if she doesn't, a Pinto and a bicycle should be able to fit in a lane together.

But my speculations come to an abrupt end. My front wheel has clipped the corner of a pothole, and the handlebars are jolted almost out of my hands. A pang of panic shoots through my stomach. Luckily I've got the bike back under control almost immediately, but by now we're almost upon the bus and I weave left ungracefully. The Pinto lady honks her horn testily, but she gives a foot to let me in, and I whisk past the rear of the bus with six inches to spare.



John Stamen

I take a more relaxed breath and start to wave a *pro forma* thank you to the woman, when suddenly the bus begins pulling out. My hand drops instantly to the handlebar, and I face another fast decision. Do I slow down and let the bus pass, tying up traffic in my lane? Or do I pedal furiously ahead and immediately angle for the curb, cutting in front of the lumbering vehicle? I glance at the driver in his large side mirror. He seems to be talking to a passenger. I decide I can pass him. I stand on the pedal, lean down with my full weight and shoot forward.

Unfortunately, the bus is accelerating, too—buses don't "lumber" downhill, I remind myself. With a burst of effort, I clear the front bumper and head for the

curb. I know the driver is annoyed because he noisily hits his air brakes a few times to make the point. But there's no time to apologize. Ahead of us a stream of cars is also edging curbsward for the right-turn-only lane onto Florida Avenue. Meanwhile, the light has turned yellow, so I start to squeeze my brakes while easing to the left of the far right lane.

As I reach the row of waiting cars, I notice something sticking out of one of the closed car doors on my right. A scarf? A seatbelt? Instinctively, I'm wary. I slow down, but the bus is on my left now, so I'm stuck in my quarter-lane. Suddenly the car door begins to open. My hands clutch the brakes, but there isn't enough distance left to stop in. Honking my horn

would mean taking my clenched hand off the brake, which would be suicidal. I can already see how sharp the edge of the door is. I have a bizarre final thought: "Body by Harnik meets body by Fisher." In terror, without planning to, I let out a blood-curdling yell. The door closes and I flash past, grinding to a stop at the light. I think to myself, "I've always wondered if I would scream." The bus pulls up next to me and the driver scowls. I scowl back. Then I cock my pedal, look ahead to see what pitfalls the next block holds, and wait for the light to turn green.

I am an urban bicycle commuter. Depending on your point of view, that makes me either a bold pioneer or a quaint relic, a dashing trend-setter or an out-of-step fool, a friend of the earth or a menace to society. In order to survive I've had to evolve nerves of steel, lungs of leather, hair-trigger reflexes, an extra reservoir of adrenalin and the ability to turn the other cheek forever. I've looked deep into the various souls of cabbies, bus drivers, tourists, cops, motorcycle delivery boys, jaywalkers—and even other cyclists. I know which red lights to run—and which ones to stop for. I scream obscenities at truck drivers and mumble apologies to pedestrians. Downtown, during the day, no other vehicle can catch me, yet in most people's eyes my form of travel is beneath contempt. I belong to a brother- and sisterhood of bicycle commuters that, in the United States, is probably 600,000 strong, but when I'm out on the street it's me alone against all . . . those . . . cars.

And yet, compared to the automobile, my bike is a singularly wonderful machine for the city.

Bikes are quick, nimble, maneuverable and well-suited to "city-size" trips—up to about five miles. Cars are awkward, unmaneuverable and forever getting in each other's way—especially in intersections during rush hour. Although autos are capable of prodigious speed, the average velocity of daytime city traffic is considerably less than 20 miles an hour (in Manhattan it's been clocked at 6 mph), a speed easily equaled by a cyclist.

The efficiency of a bicycle is almost unbelievable. For example, the energy contained in a single slice of bread will propel you and your bike almost four miles, whereas on foot you'd collapse after less than 1700 yards. In contrast, the energy value of a slice of bread wouldn't

even start a car. (Once started, the auto, which wastes 94% of the potential energy in the gas tank, would travel only 575 feet on that slice of bread.)

The auto is the major urban source of both air and noise pollution. The bike, of course, uses no fossil fuel and so causes no air pollution, and is virtually silent. And, because a bike is some 100 times lighter than an auto, it uses less of such vital natural resources as aluminum, rubber and chrome.

Unlike cars, bicycles are relatively cheap to buy and to fix. In fact, most bike repairs can be done at home. (Last week, when my bike's entire "transmission" system failed, I fixed it for \$1.04 with a new gearshift cable.) Furthermore, a bike can easily last longer than a car.

Because a bicycle takes up only about one fifteenth as much space as a car, the use of bikes sharply reduces congestion on the road and "parking lot pollution" in town. (Downtown Los Angeles today devotes fully two thirds of its space to automobiles.) As a source of exercise, bicycling is unequalled; it strengthens lungs, muscles and the heart while reducing blood pressure (without the damage to knees, ankles and feet often associated with jogging). In contrast, driving—even riding—in a car leads to obesity, hypertension, flabbiness, headaches, low-level carbon-monoxide poisoning and hemorrhoids.

And yet Americans take bicycling only slightly more seriously than roller skating. Americans own 95 million bikes, and 76 million of us ride bikes during the year (making it the second most popular participation sport after swimming), yet transportation planners have given little serious thought to the humble bicycle.

The fact is, bicycles are commonplace. They are affordable, there is little mystique surrounding them, almost everyone learned to ride one as a child, and the styles change little. There's probably a cobweb-covered one in your basement right now.

Yet even with so poor an image, bicycling is on the upswing. And the striking gains are occurring where the case for bike use is indisputable—in the cities, among adults and especially among commuters. Bicycle sales soared phenomenally in the 1970s. In the seven years beginning in 1972, Americans actually bought more bicycles (77 million) than cars (72.5 million)! In 1979, thanks to the gasoline shortage, bike sales surged even more strongly, with factories falling months behind on orders. And these bikes aren't the small-



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wheel, high-handlebar contraptions you see strewn on suburban sidewalks at dinnertime. Fully 45% are full-size, lightweight machines meant for serious riding.

One indirect cause of the increase in bicycling is the multitude of federal, state and local agencies mandated to "do something" about transportation problems in the cities. The greatest of these problems are air pollution, traffic congestion, urban highway construction and fuel consumption. Translated into policy, their solution requires gradually, inexorably challenging the automobile's special status in our society. Parking bans, higher parking fees and bridge and tunnel tolls, higher gasoline prices, stricter auto-maintenance inspections, carpool-only highway lanes, scaled-down highway construction plans and other measures combine to make cities less hospitable for motorists. And bicycling becomes relatively more attractive.

Unfortunately, however, today's cities could hardly be less geared to bikers. The traffic flow is either too fast or too slow; the air pollution ranges from annoying to debilitating; roadways are torn up by trucks and buses; lanes are the wrong widths; trolley tracks, cobblestones and sewer gratings can be lethal; theft is a problem; and bicyclists rarely are accorded equal rights in traffic. With all our modern urban and energy problems, increased bicycling is an outstanding partial solution—and Americans in many cities seem to be ready for it—but city planners and politicians aren't making the changes needed to stimulate a bicycle renaissance.

In conversations with dozens of cycling advocates and city bike coordinators and planners, several general conclusions have emerged:

- There is an appalling lack of information about cycling. Planners don't know how many people ride, when they ride, what routes they take or what improvements they would like made. (A small part of this deficiency will be remedied soon. Thanks to the efforts of the League of American Wheelmen, the U.S. Census Bureau will ask a specific question about bicycling in this year's census.)
- No large city—no city bigger than, say, Davis, California—can claim the title of "Bike City, U.S.A." Each one is still so wedded to the automobile's needs that bicyclists remain strangers in a strange land.
- Nevertheless, almost every big city has a couple of exciting innovations,

experiments or programs to help bicyclists. If all the programs were put together in one place it would mark a quantum leap in bicycle promotion—and use.

• Bicyclists, as a class, are remarkably meek in asserting their desires, needs and rights to the authorities. In particular, most bicyclists seem unwilling to challenge the basic assumption of conventional planners—that cities are to be designed for cars only.

Meekness, however, only delays the period of transition from auto domination, while more bicyclists continue to be injured and killed, assaulted by pollution, and even intimidated back into their cars. It is time for cyclists to take the offensive. Here, then, is a ten-point program that might help to usher in the Bicycle Age.

1. *Restripe auto lanes.* On many downtown streets it would be difficult to build a so-called Class I (structurally separated) or Class II (visually differentiated) bike lane. Yet a bicyclist riding on an average 9-foot-wide lane is either followed by honking cars or is continually passed with only inches to spare. The most inexpensive and politically palatable solution to this problem is to expand the right-most lane to 13 feet by repainting the roadway. That way, during rush hour, cars and bikes can ride side-by-side, but two cars won't quite fit. (And at midday a bicycle can ride alongside a row of parked cars without risking life and limb because of the proximity of hundreds of car doors, any of which could open at exactly the wrong moment. With a 13-foot lane there would be ample clearance.) Wider curb lanes should be bicyclists' minimum demand.

2. *Paint bike lanes.* A bike lane is like a car lane, except cars are not allowed in it. Separate lanes are a better solution than restriping (even though there is nothing to keep cars, double-parkers and motorcycles out of a bike lane except an occasional police officer who's behind in a ticket quota), because they are an explicit statement that cars are no longer kings of the road. Several cities have on-street bike lanes. The most exciting experiment is taking place in New York, where there are eight miles of bike-only lanes in the heart of midtown (down Fifth Avenue and Broadway and up Sixth Avenue). If the test continues to be successful, new lanes are slated to be created in other parts of New York and very likely in other cities. (It is not surprising that bike lanes raise more political problems than

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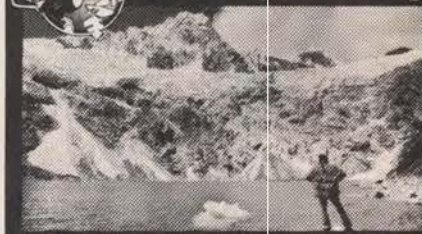
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restriping; the New York Taxi Association has counterproposed that bike riding be banned in Manhattan altogether!)

3. *Build bike lanes.* This is a better solution because it physically separates bikes and cars by a curb. These lanes exist in some smaller towns, notably Madison, Wisconsin, and Davis, California, but no major city has gone so far. (Of course, in Europe, several cities take such bike lanes for granted.) Constructing curbs is more expensive than repainting, but an Oregon cost-benefit study showed that luring 500 to 700 people from cars to bikes would justify spending \$40,000 per mile (in 1972 dollars) on bike lanes.

4. *Design streets for bikes rather than for cars.* Without actually banning cars, some roadways can be made unattractive to auto drivers and appealing to bikers. For instance, streets can be made narrow and curving, lined with trees, flower beds, fountains, benches and outdoor cafes. More important, the speed limits can be reduced to a comfortable 12 miles an hour by police vigilance, speed bumps (with narrow "bicycle slots" in them) or, best of all, rolling traffic lights.

5. *Ban cars from some streets.* This most desirable option is also the most difficult to accomplish politically. Many cities have banned cars—and bikes—from selected pedestrian shopping streets, but few have prohibited autos in favor of cycles. In Seattle, city officials determined that the old 20th Avenue N.E. Bridge was structurally unsound for heavy weights, so they limited traffic to bikes. Washington, D.C., is considering reserving a mile-long, little-used Georgetown street to local-resident traffic only. Perhaps the most remarkable experiment is on Roosevelt Island, in New York City, a thin sliver of land in the East River with a population of 10,000, which has virtually banned cars entirely. Primary access to the island is via an aerial tramway from Manhattan. Residents can drive to the island but must park in a huge garage; nonbicyclists walk or use a shuttle bus. (Islands, of course, have at least a fighting chance of curbing cars. At least three have been successful—Fire Island, New York; Nantucket, Massachusetts; and Mackinac, Michigan—and residents are enthusiastic about the clean air, the quiet, the diminished tension and the sense of community. However, all three are primarily summer resorts.)

6. *Ban cars from park roads.* Urban parks, which were created to provide a respite from the city's noise and conges-

tion, have all too often been usurped by cars. A Sunday bike ride in the park, when it means peddling among sightseers, hot rodders, motorcyclists, multi-car picnic groups and zoo visitors, can be an unpleasant, frustrating experience. Washington, San Francisco and Boston have responded to the problem by closing sections of park roads on Sundays. New York has done better, shutting most of Central Park's roadways all day on weekends and from 10 A.M. to 4 P.M. on weekdays. Seattle is a real leader, having permanently closed the roadway in Seward Park to auto traffic.

7. *Occasionally turn highways and parkways into "pedalways."* There are many parkways that are too busy and important to close to cars permanently, but too beautiful to totally abandon to auto traffic. Chicago's Lake Shore Drive, Manhattan's Henry Hudson Parkway, Detroit's Belle Isle Drive, Washington's George Washington Parkway, Brooklyn's Belt Parkway, Philadelphia's Schuylkill Expressway, Boston's Storrow Drive and many others are all roads that deserve to be experienced for their views, landscaping, smells and sounds in leisurely manner—by bike, on foot or even on roller skates, without the noise, fumes and danger of cars. Certainly our cities could survive if these roads were closed two or three Sundays every year. In the past, the National Park Service closed the lovely George Washington Parkway from Washington to Mt. Vernon one day a year (unfortunately this practice ended when a bike path was built). Seattle has monthly "Bike Sundays" during the summer, with the carpool-only lanes of Interstate 5 closed to cars and with the speed limits of several spectacular scenic roads reduced to 25 miles per hour. In New York City, the American Youth Hostel sponsors an elaborate five-borough bike marathon with 36 miles of streets closed to cars (attracting, in 1978, more than 10,000 participants).

Not all the desirable measures favor bikes over cars. Here are some that even Detroit could support:

8. *Provide bike lockers and better bike racks.* Most bike racks look as though they were designed and placed by the Brotherhood of Hot Bike Dealers. Since theft is a major deterrent to cycling, racks need to become a major deterrent to thieves; the fixtures must be designed to protect both wheels and frames (most don't), and they must be located in well-lit areas, much-frequented or even watched by guards (such as parking-lot attendants). In high-crime areas, it may

be necessary to provide metal lockers for bicycles.

9. "Piggy-biking." There are occasions when it is necessary or desirable to transport a bike on another vehicle. Some cities have bridges or tunnels impassable to bicycles. Others have excellent suburban bike-trail networks that are too far from the city to reach by bike and return in a day. Haltingly, public transit is rising to the challenge. Some West Coast cities, most notably San Diego, have "pedal-hopper" service whereby bicycles can be placed on racks on the rear of buses for some trips. The San Francisco Bay Area Rapid Transit system also allows bicycles in the rear cars of trains during nonrush-hour periods, as does New York's subway from Manhattan to New Jersey. However, many other trains, such as New York's Conrail and Long Island Railroad lines to the suburbs, prohibit bicycles even on weekends.

10. *Plan with common sense.* Often it's the little details of route planning that make all the difference. Many cities erect bikeway signs, but the bicyclists cannot find the route except by stumbling across it. Other cities have lovely bike routes that don't lead anywhere useful. Portland, Oregon, solved that problem with an impressive bicycle map that indicates hills, city bike racks and dangerous trolley tracks, as well as showing which bike routes have heavy bus traffic and which don't. The map even rates streets with a color code, much as ski slopes or canoeing streams are rated. The map takes into account not only traffic volume and roadway width, but even stop signs—and indicates the location of bike shops.

Other common-sense actions to stimulate bicycling are sweeping bikeways free of snow, ice, gravel and broken glass; replacing old sewer gratings that are so aligned as to trap bicycle tires; requiring office and apartment buildings to provide bicycle-storage space (as is now required in Palo Alto, California); passing bottle-bill laws to reduce the amount of broken glass on roadways; and building shower facilities at workplaces for more pleasant midsummer cycling.

Bicycling is good for people. It will make us—individually and as a nation—more self-reliant and independent, healthy and community-oriented. To a growing number of people, that sounds like just the right prescription for these uncertain, changing times. □

Peter Harnik is a consultant to nonprofit organizations in Washington, D.C., and the organizer of a bicycle demonstration there on April 22, the tenth anniversary of Earth Day.

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To Members of the Sierra Club

Fiscal 1979 ended with a surplus of \$397,001, compared with a deficit in 1978 of \$16,901. Fund balances (commonly called net worth) reached an historic high of \$1,131,011, up 53% from last year.

Revenues rose \$1,116,138 to \$8,531,446 in fiscal 1979, primarily as a result of an increase in contributed income of \$485,281 and increased royalties from calendars of \$337,563. In addition, while the number of members declined by 436 to 177,708, revenue from member dues was up from 1978 by \$267,425, to \$2,884,902.

Expenses rose \$702,236, to a total of \$8,134,445. Expenses in fiscal 1979 for studying and influencing public policy and for information and education increased \$249,498 and \$139,647, respectively. Total 1979 expenditures for program services increased \$504,258. Effective administrative actions caused reductions in expenditures for some internal expenses, with telephone expense down \$24,063, insurance down \$3,545, and interest down \$8,367. Expenditures for support services of \$1,382,881 represented 17% of total expenses.

The improvement in the fund balances will provide reserves for financing programs during those periods in 1980 of seasonally low income. Inflation and the continued growth of Sierra Club programs will require continued growth of those fund balances as a Club goal.

Pursuant to the provisions of sections 8321 and 8322 of the California Corporation Code, the following information is furnished as an annual report:

The Club's financial statements for the fiscal years ended September 30, 1979, and September 30, 1978, together with the report of Price Waterhouse & Co., independent accountants, are presented herein;

The membership list of the Sierra Club is on file at the Club's headquarters at 530 Bush Street, San Francisco, California, 94108;

There are no transactions to disclose that constitute a conflict of interest involving directors or officers; no member has voting power of 10% or more;

The books of account and minutes of meetings of the Board of Directors are available for inspection by members on written request at the Club's headquarters at 530 Bush Street, San Francisco, California 94108.

Denny Shaffer, Treasurer

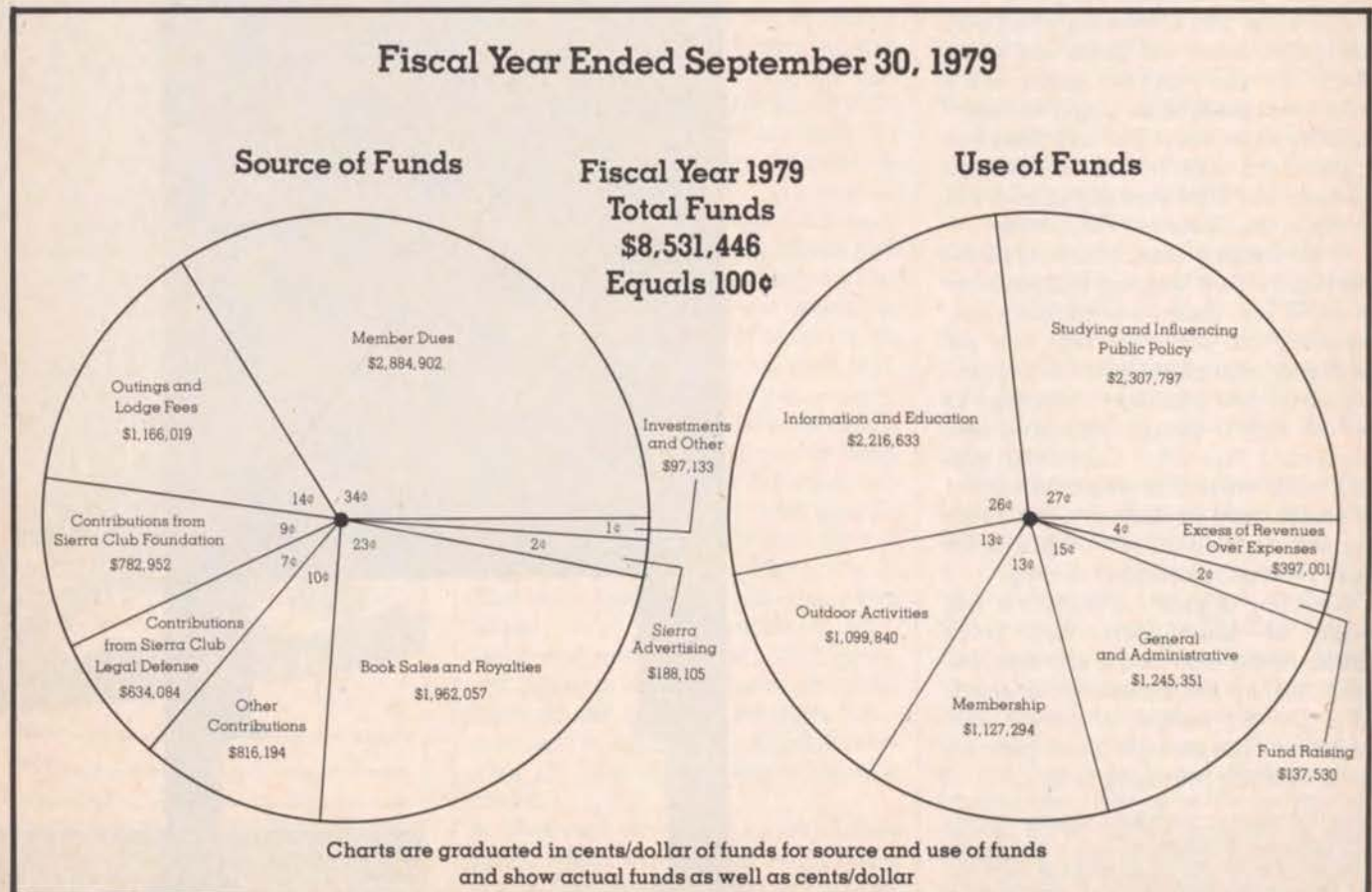
Report of Independent Accountants

To the Board of Directors and
Members of the Sierra Club

December 13, 1979

In our opinion, the accompanying balance sheets and the related statements of revenues and expenses and changes in fund balances and of functional expenses present fairly the financial position of the Sierra Club at September 30, 1979 and 1978, and the results of its operations and the changes in its fund balances for the years then ended, in conformity with generally accepted accounting principles consistently applied. Our examinations of these statements were made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

Price Waterhouse & Co.
San Francisco, California



**Sierra Club
Balance Sheet**

ASSETS	September 30	
	1979	1978
Current assets:		
Cash	\$ 6,123	\$ 100,294
Accounts receivable—publications, less allowance for returns of \$75,000 in 1979	738,308	464,081
Other receivables, less allowance for doubtful accounts of \$15,000 in 1979 and \$6,000 in 1978	145,813	149,767
Note receivable—sale of bequested land		141,700
Federal grant receivable	139,836	88,000
Investments, pledged as security for notes payable to bank (Notes 2 and 4)	784,800	729,798
Inventories—principally publications, at the lower of cost (first-in, first-out) or market	448,989	294,752
Royalty and other advances (less allowance of \$41,831 in 1979 and \$45,894 in 1978)	254,324	245,250
Prepaid expenses	186,626	187,912
Total current assets	2,704,819	2,401,554*
Property and equipment, less accumulated depreciation (Note 3)	582,384	598,622*
	\$3,287,203	\$3,000,176

LIABILITIES AND FUND BALANCES

Current liabilities:		
Bank overdraft (per books)	\$ 328,689	
Accounts payable	697,290	\$ 705,785
Notes payable to bank (Note 4)	255,000	600,000
Other notes payable (Note 4)	101,000	100,000
Obligations under capital leases (Note 7)	55,330	25,138
Accrued salaries, royalties and other expenses	289,723	212,015
Advance travel reservations, publication orders and other deferred revenues	205,056	311,893
Total current liabilities	1,932,068	1,954,831
Long-term obligations under capital leases (Note 7)	224,124	305,335
	2,156,192	2,260,166
Fund balances (Note 9):		
Restricted	63,984	69,924
Unrestricted	1,067,027	670,086
	1,131,011	740,010
	\$3,287,203	\$3,000,176

*1978 amounts have been reclassified for comparative purposes. See accompanying notes to financial statements.

Sierra Club

**Notes to Financial Statements
September 30, 1979 and 1978**

NOTE 1—Organization and accounting and reporting policies:

The Sierra Club is a not-for-profit voluntary membership organization established to restore the quality of the natural environment and to maintain the integrity of its ecosystems. The Club operates many diverse public interest programs covering a broad range of environmental issues. The studying and influencing public policy program consists of staff and volunteers engaged in both legislative and non-legislative activities including lobbying, research, legal and policy development. Information and education includes the literary programs of Sierra Club Books and *Sierra*, the Club's bulletin. Outdoor activities include a national and international outings program of over 250 trips annually. The membership program includes support and funding of 53 volunteer chapters and over 280 groups, and the development of a broad-based volunteer membership.

Basis of accounting

The financial statements of the Club do not include the financial activities of the Club's various self-directed chapter and group organizations.

A number of members of the Club have donated significant amounts of time to both the Club and its chapters, groups and committees in furthering the Club's programs and objectives. No amounts have been reflected in the financial statements for donated member or volunteer services to the Club inasmuch as no objective basis is available to measure the value of such services.

Summary of significant accounting policies

The financial statements of the Club are prepared on the accrual basis of accounting.

The Club provides for estimated losses resulting from future returns of its publications at the time of their sale.

Property and equipment is recorded at historical cost or market value at date of gift or bequest, as appropriate. Depreciation expense is determined using the straight-line method over the estimated useful lives (5 to 30 years) of the related assets.

Investments in marketable securities expected to be held to maturity are recorded at cost.

Payments made on behalf of the Club by The Sierra Club Foundation and legal services performed on behalf of the Club by Sierra Club Legal Defense Fund are recorded as contributions (revenue) with equivalent amounts charged to appropriate expense accounts. All contributions are considered to be available for unrestricted use unless specifically restricted by the donor.

NOTE 2—Investments, pledged as security for notes payable to bank (see Note 4):

	Recorded value	Market value
September 30, 1979:		
U.S. Government and Federal Agency Bonds	\$778,484	\$760,768
Cash in savings account held for investment in marketable securities	6,316	6,316
	\$784,800	\$767,084

September 30, 1978:		
U.S. Government and Federal Agency Bonds	\$655,617	\$643,915
Cash in savings account held for investment in marketable securities	74,181	74,181
	\$729,798	\$718,096

Investment income amounted to \$59,295 in 1979 and \$69,046 in 1978 and includes a realized net gain on the sale of marketable securities of \$226 in 1979 and a net loss of \$879 in 1978.

NOTE 3—Property and equipment:

	September 30	
	1979	1978
Land	\$ 51,100	\$ 51,100*
Buildings and leasehold improvements	193,596	178,627*
Furniture and equipment	130,473	106,368
Leased equipment	406,590	381,558
	781,759	717,653
Less—Accumulated depreciation and amortization	199,375	119,031
	\$582,384	\$598,622

Depreciation and amortization included in expenses amounted to \$81,715 in 1979 and \$76,131 in 1978.

*1978 amounts have been reclassified for comparative purposes.

NOTE 4—Notes payable:

At September 30, 1979 and 1978, the Club had a revolving line of credit of \$650,000 and \$600,000, respectively, with a bank at the bank's prime interest rate. Borrowings are secured by the Club's marketable securities and cash in savings account held for investment in marketable securities (see Note 2).

The other note payable is unsecured and bears an interest rate of 6% at September 30, 1979 and 5¼% at September 30, 1978.

NOTE 5—Tax status:

The Club has been granted tax-exempt status under Section 501(c)(4) of the Internal Revenue Code as a civic organization operated exclusively for the promotion of social welfare and Section 2370(d) of the California Revenue and Taxation Code, whereby only unrelated business income, as defined by the Codes, is subject to income tax. For the years ending September 30, 1979 and 1978, the Club's unrelated business activities did not result in taxable income and, accordingly, the financial statements include no provisions for federal or state income taxes. Contributions to the Club are not deductible for tax purposes by the donor.

NOTE 6—Pension plan:

Under the Club's insured pension plan, all employees who have been engaged for more than six months, providing they work at least 1,000 hours per year for the Club and are between 24½ and 62 years of age at the time of initial employment, are covered by the plan. While not required, employees may contribute a portion of their salaries to provide for increased retirement benefits.

Sierra Club
Statement of Functional Expenses Years ended September 30, 1979 and 1978

	Program services					Support services			Total expenses 1979	Total expenses 1978
	Studying and influencing public policy	Information and education	Outdoor activities	Membership	Total	General and administrative	Fund raising	Total		
Salaries and employee benefits	\$ 930,985	\$ 386,686	\$ 136,170	\$ 180,302	\$1,634,143	\$ 603,493	\$ 60,932	\$ 664,425	\$2,298,568	\$2,003,396*
Outside contract services	176,038	359,029	1,697	115,453	652,217	183,575	10,291	193,866	846,083	664,896
SCLDF legal services (Note 8)	634,084				634,084				634,084	562,400
Lodge and outings field expense			658,407		658,407	940		940	659,347	700,507*
Cost of sales, principally of publications		457,285			457,285				457,285	488,754
Copying and printing expenses	59,245	23,135	7,052	71,987	161,419	(11,798)	9,452	(2,346)	159,073	139,628
Bulletin production expense	1,500	247,296	12,345	8,583	269,724	678		678	270,402	284,830
Mailing and office supplies	113,385	213,787	66,403	219,277	612,852	94,645	41,949	136,594	749,446	647,774*
Travel and meetings	135,789	57,406	41,662	250	235,107	66,219	5,317	71,536	306,643	352,947
Royalties on publications		174,541			174,541				174,541	190,737
Rent and office expenses	70,771	59,955	16,553	17,980	165,259	107,403	6,271	113,674	278,933	240,608*
Advertising and promotion	4,975	155,902	39,007	2,551	202,435	4,864	20	4,884	207,319	147,087
Chapter dues allocations				507,372	507,372				507,372	458,276
Telephone	107,162	20,372	10,522	2,856	140,912	16,091	2,618	18,709	159,621	183,684
Insurance		3,033	83,354		86,387	29,314		29,314	115,701	119,246
Interest		17,893			17,893	48,717		48,717	66,610	74,977
Other expenses	73,863	40,313	26,668	683	141,527	101,210	680	101,890	243,417	172,462*
	<u>\$2,307,797</u>	<u>\$2,216,633</u>	<u>\$1,099,840</u>	<u>\$1,127,294</u>	<u>\$6,751,564</u>	<u>\$1,245,351</u>	<u>\$137,530</u>	<u>\$1,382,881</u>	<u>\$8,134,445</u>	<u>\$7,432,209</u>

*1978 amounts have been reclassified for comparative purposes.
 See accompanying notes to financial statements.

Pension expense, representing the Club's annual contribution to the plan, was \$38,176 in 1979 and \$48,788 in 1978. The Club funds pension costs as accrued. At September 30, 1979, the market value of the plan's assets exceeded the present value of vested benefits.

NOTE 7—Lease commitments:

The Club's San Francisco, Washington, D.C., and New York City office facilities and certain equipment are leased under various agreements expiring between 1981 and 1986. The initial term of the lease for the San Francisco office expires in November 1985. The lease provides for renewal options for two five-year terms after renegotiation of rental terms, and for an option to purchase, at fair market value, the office building and the underlying land after the fifteenth year of the lease. Other field offices are leased for periods of one year or less and such leases are renewed or replaced in the normal course of business.

Excluding the capital leases discussed below, at September 30, 1979, minimum annual rental commitments for office facilities and equipment for the next seven years are as follows: 1980—\$229,930; 1981—\$232,824; 1982—\$226,090; 1983—\$221,010; 1984—\$208,510; 1985—\$206,010; 1986—\$34,335.

The Club leases its computer facilities, certain related application programs and other equipment under capital leases. These leases provide the Club with options to purchase the leased assets for nominal amounts at the expiration of the lease terms. The following is a schedule by fiscal years of future lease payments under

such capital leases together with the present value of the lease payments at September 30, 1979:

1980	\$ 89,173
1981	70,732
1982	55,744
1983	55,744
1984	55,744
1985	55,744
1986	13,936
Total lease payments	396,817
Less—Amount representing interest	117,363
Present value of lease payments	<u>\$279,454</u>

The above amount is reflected in the balance sheet as current and long-term obligations under capital leases of \$55,330 and \$224,124, respectively.

NOTE 8—Contributions from the Sierra Club Foundation and Sierra Club Legal Defense Fund:

Contributions from the Sierra Club Foundation representing direct grants to the Club and payments on behalf of the Club in support of programs that are non-legislative in nature totalled \$782,952 in 1979 and \$585,271 in 1978.

Contributions from the Sierra Club Legal Defense Fund representing legal services performed on behalf of the Club totalled \$634,084 in 1979 and \$562,400 in 1978. In addition, the Sierra Club Legal Defense Fund donated funds to support the Club's legal research amounting to \$7,862 in 1978.

NOTE 9—Funds:

The following is a summary of fund balances:

	September 30	
	1979	1978
Restricted funds:		
Principal not available for expenditure	\$ 49,500	\$ 55,500
Principal and income available for expenditure	14,484	14,424
	<u>63,984</u>	<u>69,924</u>
Unrestricted funds:		
Fund designated by Club bylaws for permanent investment	645,047	618,037
Designated by Board of Directors for Clair Tappaan Lodge reserve	82,500	82,500
Investment in property and equipment	302,929	268,149*
	1,030,476	968,686
Accumulated excess (deficit) from general operations	36,551	(298,600)*
	1,067,027	670,086
	<u>\$1,131,011</u>	<u>\$740,010</u>

*1978 amounts have been reclassified for comparative purposes.

Sierra Club
Statement of Revenues and Expenses and Changes in Fund Balances
Years Ended September 30, 1979 and 1978

	1979			1978
	Unrestricted	Restricted	Total	Total
Revenues:				
Member dues	\$2,884,902		\$2,884,902	\$2,617,477
Contributions	1,094,310	\$1,138,920	2,233,230	1,747,949
Outings and lodge reservations and fees	1,166,019		1,166,019	1,228,404
Sales, principally publications	1,219,193		1,219,193	1,208,124
Royalties on publications	742,864		742,864	405,301
Advertising, investment and other income	284,438	800	285,238	208,053
	<u>7,391,726</u>	<u>1,139,720</u>	<u>8,531,446</u>	<u>7,415,308</u>
Expenses:				
Program services:				
Studying and influencing public policy	1,483,636	824,161	2,307,797	2,058,299
Information and education	1,930,615	286,018	2,216,633	2,076,986
Outdoor activities	1,075,942	23,898	1,099,840	1,097,466
Membership	1,127,294		1,127,294	1,014,555
	<u>5,617,487</u>	<u>1,134,077</u>	<u>6,751,564</u>	<u>6,247,306</u>
Support services:				
General and administrative	1,242,348	3,003	1,245,351	1,066,869
Fund raising	134,950	2,580	137,530	118,034
	<u>1,377,298</u>	<u>5,583</u>	<u>1,382,881</u>	<u>1,184,903</u>
	<u>6,994,785</u>	<u>1,139,660</u>	<u>8,134,445</u>	<u>7,432,209</u>
Excess (deficiency) of revenues over expenses	396,941	60	397,001	(16,901)
Other changes in fund balances:				
Returned to donor		(6,000)	(6,000)	
Fund balances, beginning of year	670,086	69,924	740,010	756,911
Fund balances, end of year	<u>\$1,067,027</u>	<u>\$ 63,984</u>	<u>\$1,131,011</u>	<u>\$ 740,010</u>

See accompanying notes to financial statements.

Restricted funds

These funds are restricted as designated by the donors.

Unrestricted funds

Revenues from life memberships are designated by the bylaws of the Club for separate investment as a permanent fund, only the income of which may be expended for general operations. In addition, the Board of Directors has designated a portion of the unrestricted fund to provide for funds in addition to insurance coverage to rebuild Clair Tappaan Lodge in the event of fire.

NOTE 10—Pending litigation:

The Sierra Club and certain editors of one of its chapter newsletters are defendants in a suit filed in U.S. District Court, in 1977, in which they have been charged by two individuals with publishing an article containing certain statements regarding the plaintiffs which were false and defamatory. The plaintiffs are seeking damages of \$4,000,000. Management believes there is virtually no likelihood that any material liability will accrue to the Club upon resolution of this suit.

The Club has been named as a defendant in various other legal proceedings. Management is of the opinion that it is unlikely that any material liability will result from such proceedings.

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On Developing Clout Continued from page 31

- If you live in a state with a presidential primary, volunteer to work in your candidate's campaign—as a conservationist. Recruit other friends who support this candidate to work with you—as conservationists. Wear a green button saying "Vote Environment" (available from SCCOPE for 50¢).

- In all states, with or without primary elections, most delegates are selected at party caucuses. Caucuses are local meetings held by each party and open to any voter registered in that party. A caucus is, in effect, a miniature political convention. Rules and customs differ from state to state; the best way to learn how they work is to ask a friend who has been to a caucus in your area.

Learn the date and location of your party's caucus by calling the local party headquarters or your newspaper. Then organize a group of ten or fifteen conservation-minded friends, put on your green buttons, and go wield your influence.

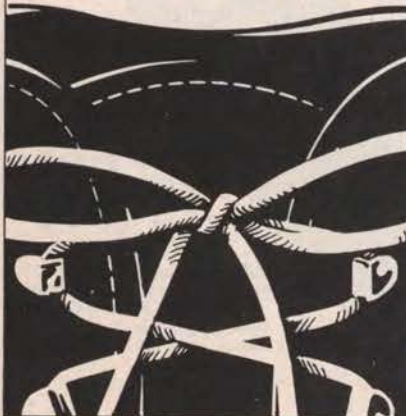
- If you live in a state where the number of delegates allocated to candidates is decided by a primary vote, your objective should be to get as many environmentalists as possible included in your candidate's delegation. In states with primaries, the caucuses do not determine how many delegates each candidate will receive, but they do decide which people are chosen as delegates to support each candidate's slate at the convention. There usually are more people seeking to be convention delegates for a given candidate than that candidate is allotted by the primary-election results. Of those seeking to be delegates, some will be strongly

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Where to Write

The Sierra Club Committee on Political Education is the arm of the club directly involved in political campaigns. Contact SCCOPE by writing Campaign 1980, Sierra Club, 530 Bush St., San Francisco, CA 94108, in order to:

- order green "Vote Environment" buttons at 50¢ each;
- tell us your campaign strategies for the environment;
- learn of other politically involved environmentalists in your state;
- get more information about the committee;
- send a contribution.

committed to the environment, some will be sympathetic, and some hostile. Use your bloc of green-buttoned voters to send pro-environmental delegates to the convention.

- In states without primary elections, the caucus attendees decide not only who will be delegates to the convention; they also decide which candidates will get the most delegates. A block of environmental voters can wield influence in the following ways:

If a good-sized bloc of voters committed to one candidate and wearing green buttons attends a caucus and delivers its votes for the candidate *en masse*, other candidates learn that environmentalists deliver for their favorites.

A bloc of uncommitted conservationists can negotiate with supporters of several candidates about including environmentalists in those delegations. The green-buttoned conservationists then deliver their votes for the slate that promises the most environmentalist delegates.

- Finally, if you want to immerse yourself in the election excitement, run for delegate yourself, or recruit another environmentalist to run. Unless environmentalists run for delegate positions, there will be no possibility of a large bloc of environmentalists being chosen as delegates.

Running for delegate can be the perfect entry into politics—it's over fairly quickly, yet gives an accurate taste of what campaigning is like. It also puts you in a position to encourage your party's nominee to pay attention to the environment. Running large numbers of delegates is a strategy that has been adopted successfully by other groups: labor unions, farmers, women and minorities. 1980 could be the year the environmental caucus emerges as a major force at the national conventions—if enough environmentalists make the effort.

You've probably thought of other ways to affect the political process on behalf of the environment—let SCCOPE know about them. If you are planning substantial involvement in the delegate process, and particularly if you may run for delegate yourself or know a conservationist who will, please write SCCOPE and ask to be put in touch with other conservationists in your state and at the convention. Whatever your politics, let 1980 be the year you get involved on behalf of the environment. □

Carl Pope is a Sierra Club assistant conservation director and is executive director of the California League of Conservation Voters.



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


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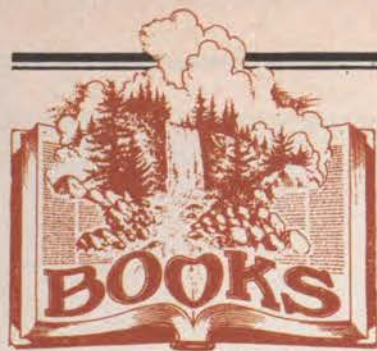
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Books on Energy: A Current Checklist

Compiled by DAISY MARYLES and ROBERT DAHLIN

In February 1978, *Sierra* printed an extensive checklist of books on energy prepared by Publishers Weekly, a magazine for the book trade. PW recently took a new look at current and upcoming books on energy. Eighty-eight publishers responded to PW's questionnaire (compared to 60 in 1977), and the number of titles cited has also increased—from 102 to 160. We are pleased to have PW's permission to reprint the new checklist for *Sierra* readers. All the books are in print, except those for which the publication date is indicated. Books are listed by category and, within categories, alphabetically by publisher.

GENERAL

Anchor Press/Doubleday. Ho-ping: Food for Everyone. Medard Gabel with the World Game Laboratory. Offers 42 strategies toward the elimination of hunger and includes programs for harnessing world agricultural productivity to solve the energy crisis. \$9.95, paper.

Energy, Earth & Everyone. Medard Gabel. Incorporates the latest statistics on current and potential energy sources and presents a global energy inventory. \$9.95, paper.

Ballinger Publishing. Energy: The Next Twenty Years. Compiled by Energy: The Next Twenty Years Study Group, Hans H. Landsberg, chairman. Identifies fundamental realities defining energy problems and separates real from unreal concerns. \$22.50; paper, \$9.95.

U.S. Energy Policy: Errors of the Past, Proposals for the Future. Edited by Walter J. Mead and Albert E. Utton. Addresses a broad spectrum of energy problems. \$19.50.

Bantam. Energy: The Fuel of Life. Prepared by the editors of *Encyclopaedia Britannica*. Describes different types of energy from muscle to solar power and includes a section on alternative energy possibilities. A Bantam/Britannica book. \$2.50, paper.

Poverty of Power. Barry Commoner. Defines the intricacies of energy supply and demand, and the connections between pollution, economic stagnation and vanishing energy reserves. \$2.95, paper.

Closing Circle. Barry Commoner. A classic treatise on energy and the environmental crisis. \$2.95, paper.

Butterworths. Handbook of Energy Storage. Johannes Jensen. "How to store heat, electricity, and mechanical energy" and "What are the major problems regarding technology, economy and performance for the different systems?" are some of the questions posed and answered. \$21.95.

Facts On File. Energy Crisis: Volume 4. Lester Sobel. Chronicles events and positions taken in the energy crisis. \$15. July 1980.

W. H. Freeman. Energy from Heaven and Earth. Edward Teller. A cautiously optimistic view of the world energy situation stressing the foresight necessary to deal with the crisis. \$15.

Energy: Readings from Scientific American. Introductions by S. Fred Singer. An examination of promises and shortcomings of various energy sources that predicts possible new developments. \$5, paper.

Stephen Green Press. The Energy Book. Edited by John Mitchell. The report published in association with the Massachusetts Audubon Society focuses on the status of energy in the United States. \$9.95, paper.

McGraw-Hill. The Last Chance Energy Book. Owen Phillips. The Decker Professor in Science and Engineering at Johns Hopkins University examines the extent of the energy crisis and our energy options. \$4.95, paper. April 1980.

Neal-Schuman Publishers. Energy: Sources of Print and Nonprint Materials. Compiled by Maureen Crowley. Lists organizations, agencies and corporations offering materials on energy. \$17.95.

Random House. Energy Future: Report of the Energy Project at the Harvard Business School. Edited by Robert Stobaugh and Daniel Yergin. A current national best-seller, this study analyzes the conventional sources of energy and their future prospects. \$12.95.

University of New Mexico Press. Energy, Economic Growth, and Regionalism in the West. Lynton R. Hayes; foreword by Richard Lamm, Governor of Colorado. Energy development, particularly the West's response to the increased demand for its resources in the last decade. \$15.95.

University of Oklahoma Press. Innovations in Energy: The Kerr-McGee Story. John Samuel Ezell. An account of the Kerr-McGee

company from the drilling of its first offshore well to its development of such other natural resources as uranium. \$17.50.

Our Energy Future: The Role of Research, Development and Demonstration in Reaching a National Consensus on Energy Supply. Don E. Kash, Michael D. Devine, James B. Freim, Martha W. Gilliland, Robert W. Rycroft, Thomas J. Wilbanks. \$24.95; paper, \$8.95.

University Press of Kentucky. Access to Energy: 2000 and Beyond. Melvin A. Conant. Analyzes the political developments associated with geographically limited resources such as oil and uranium, and asserts that these resources will continue to be the dominant focus of international politics into the next century. \$9.75.

Yale University Press. The Efficient Use of Energy Resources. William D. Nordhaus. A former member of the President's Council of Economic Advisers discusses consumption of energy. \$17.50.

OIL

Bantam. The Seven Sisters. Anthony Sampson. A look at the huge oil concerns that dominate the industry. \$2.95, paper.

Houghton Mifflin. The Decline of U.S. Power. Compiled by the *Business Week* Team. Traces the rise of OPEC and the failure of the Nixon, Ford and Carter administrations to produce an effective energy program, and examines the problems confronting American multinationals, especially the oil companies. \$15. May 1980.

Venezuela: Oil and Politics. Romulo Bencancourt. A former president of Venezuela offers an inside view of the political and economic forces in the Third World that have led to the present oil crisis. \$14.95.

Lexington Books/D. C. Heath. International Oil Policy. Arnold E. Safer; foreword by Senator Edward M. Kennedy. Examines the international aspects of the energy crisis and discusses policies the U.S. government should pursue to dilute OPEC's power. \$13.95.

Penguin. Oil and World Power: Background to the Oil Crisis. Peter R. Odell. The fifth edition of this book explains the complexities of the oil situation in light of recent events. \$3.95, paper.

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NUCLEAR

Bantam. **Unacceptable Risk: The Nuclear Power Controversy.** An examination of nuclear power, its history, function, politics and controversies. \$2.95, paper.

Basic Books. **Light Water: How the Nuclear Dream Dissolved.** Irvin C. Bupp and Jean-Claude Derian. Documents the collapse of public approval for the American-designed "light water" nuclear reactor. \$11.50.

Dell/Laurel. **Nuclear Power: The Unviable Option.** John J. Berger; introduction by Linus Pauling. Discusses a range of subjects, including nuclear terrorism, and presents a fictionalized account of a meltdown. \$2.50, paper.

Facts On File. **Atomic Energy and the Safety Controversy.** Grace Ferrara. Covers such developments as the plutonium leak into the Erie Canal mud, India's denial of radioactive danger, and the theft of radioactive material for illegal bomb manufacture. \$15.

Grosset & Dunlap. **The New Tyranny.** Robert Jungk. Suggests that progressive suspension of civil liberties can be attributed to real or imagined threats posed by nuclear technology. \$10.

Harper & Row. **No More Harrisburgs: The Case Against Nuclear Energy.** Environmental Action Foundation. Includes discussions by such people as Amory Lovins and Senator Mike Gravel. \$2.50, paper.

Lawrence Hill. **The Energy War: Reports from the Front.** Harvey Wasserman. A history of the developing movement against nuclear energy by journalist and nuclear activist Wasserman, who alleges that Three Mile Island was only one of many nuclear disasters. \$12.95; paper, \$5.95.

Lexington Books/D. C. Heath. **Nuclear Power and the Public Safety: A Study in Regulation.** Elizabeth S. Rolph. Based on a Rand Corporation research study, this book investigates regulation by the Atomic Energy Commission (1954-1974) of the nuclear power industry. \$17.95.

MIT Press. **Economic and Environmental Impacts of a U.S. Nuclear Moratorium, 1985-2010.** Edited by Alvin M. Weinberg. An analysis of the nuclear energy debate. \$17.50.

New York University Press. **Nuclear Power and the Energy Crisis: Politics and the Atomic Industry.** Duncan Burn. Analyzes the politics and economics of decisions concerning development and supply of nuclear power. \$26.50.

Pantheon. **The Anti-Nuclear Handbook.** Stephen Croall and Kaianders. An identification of the nuclear age. \$2.95, paper.

Rodale Press. **Poisoned Power: The Case Against Nuclear Power Plants Before and After Three Mile Island.** John Gofman and Art Tamplin. A revised edition of the 1971 book written by the two nuclear scientists. \$9.95, paper.

University of Chicago Press. **Swords from Plowshares: The Military Potential of Civilian Nuclear Energy.** Albert Wohlstetter *et al.* Shows how the peaceful and military uses of nuclear technology have become intertwined. \$5.95, paper.

University of Michigan Press. **Nuclear Power: Technology on Trial.** James Duderstadt and Chihiro Kikuchi. The press says this is an objective look at the advantages and problems of nuclear power by two men who favor its development. \$16; paper, \$8.50.

ALTERNATIVE SOURCES

General

Delta/Seymour Lawrence. **Energy Primer: Solar, Water, Wind, and Biofuels.** Edited by Richard Merrill and Thomas Gage. Focuses on small-scale systems applicable to the needs of an individual, group or community. \$7.95, paper.

Friends of the Earth. **The Energy Controversy: Soft Path Questions and Answers.** Amory Lovins. An elaboration of the author's "Soft Energy Paths," in which he wrote of capturing energy from the sun, winds, tides and rivers. \$12.50; paper, \$6.95.

Stephen Greene Press. **The Journal of the New Alchemists.** Edited by Nancy Todd. Based on findings of the New Alchemy Institute of Woods Hole, Massachusetts, this report details energy research and suggests how to integrate architectural, ecological and agricultural knowledge with solar and wind technologies. \$14.95; paper, \$9.95.

Johns Hopkins University Press. **Energy in America's Future: The Choices Before Us.** Joel Darmstadter, *et al.* An analysis of the technical, economic and political feasibility of various energy sources from oil to solar heating, \$30; paper, \$12.50.

The Last Chance Energy Book. Owen Phillips. Deals with conservation and with development of alternate fuel sources from liquefaction of coal to producing energy from plants. \$9.95.

Knopf. **The Politics of Energy.** Barry Commoner. A biologist and environmentalist speaks against nuclear power and for solar energy. \$10; paper, \$4.95.

Praeger. **The Economics of Nuclear and Coal Power.** Saunders Miller, assisted by Craig Severance. Charges that the economics



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Rand McNally. Our Magnificent Earth: A Rand McNally Atlas of Earth Resources. Edited by Pat Gilliland; foreword by Robert S. McNamara. Describes available energy resources, methods of development and pros and cons of available options. Over 800 diagrams, photos, maps and charts. \$35.

Running Press. Energybook #2: More Natural Sources and Backyard Applications. John Prenis. A sequel to the publisher's "Energybook #1" (\$4, paper), this backlist title explores the utilization of methane, plant energy and trash power, among other things. Includes a directory of sources and manufacturers. \$5.

Schocken. Methane: Planning a Digester. Peter-John Meynell. A handbook on building a digester to produce methane for use in the home or on the farm. \$4.95, paper.

Seabury Press. Alternative Sources of Energy. Edited by Sandra Eccli. Contains more than 140 articles telling how anyone can use nontechnological power for daily living. \$7.95, paper.

Sierra Club Books. Other Homes and Garbage: Designs for Self-Sufficient Living. Jim Leckie, Gil Masters, Harry Whitehouse and Lily Young. Four Stanford engineers explain solar heating principles and provide practical information for developing alternative styles of technology. \$9.95, paper.

Van Nostrand Reinhold. Reports from the Energy Underground. Malcolm Wells. Essays on energy problems and alternative solutions by people who are prominent in the field. \$9.95.

John Wiley. Synthetic Fuels from Coal: Overview and Assessment. Larry L. Anderson and David A. Tillman. Explores whether synthetic fuels derived from coals provide a practical solution to the energy crisis. \$17.50.

Solar

Avon. The Coming of Solar Energy. D. S. Halacy. The history, technology and future of sun power. \$2.25, paper.

Ballantine. Direct Use of the Sun's Energy. Farrington Daniels. Explores solar energy as a source of power in the average household. \$1.95, paper.

Brick House. New Inventions in Low-Cost Solar Heating: 100 Daring Schemes Tried and Untried. William A. Shurcliff. Covers both active and passive systems. \$18; paper, \$12.

John Barling's Solar Fun Book: 18 Projects for the Weekend Builder. John Barling. How to make a solar hot-dog cooker and 17 other "appliances." \$7.95, paper.

Brick House/Cheshire Books. The Solar Home Book. Bruce Anderson with Michael Riordan. Shows and tells how to heat, cool and design with the sun. \$12.95.

Butterick Publishing. Solar Energy: How to Make It Work for You. Peter Jones and Steven Mueller. Designed for homeowners and people with small businesses, this book includes step-by-step, do-it-yourself procedures for most of the solar-energy systems currently available. \$4.95, paper.

Cheshire Books/Van Nostrand Reinhold. A Golden Thread: 2500 Years of Solar Architecture and Technology. Ken Butti and John Perlin. The evolution of solar energy and technology through 2500 years of Western civilization. \$14.95; paper, \$8.95.

Chilton. Solar Energy Handbook. The Power Systems Group, AMETEK, Inc. Designed to be a bridge between highly technical volumes and oversimplified do-it-yourself books. \$18.50.

Domus Books. Solar Energy: A Biased Guide. William L. Ewers. A second edition of this book on solar-energy technology, applications and politics. \$9.95; paper, \$4.95.

Everest House. The Solar Age Resource Book. Martin McPhillips and Bruce Anderson. The editors of *Solar Age* magazine tell how to understand and harness solar energy for natural heating. \$9.95, paper.

Fawcett Popular Library. People Who Live in Solar Houses (and What They Say About Them). Chester and Martha Davis. Features the experiences of solar-home owners from New Mexico to Maine, with information on solar power use, performance, problems and cost. \$2.25, paper.

Halsted Press. Biological Energy Sources. Malcolm Slesser and Chris Lewis. Illustrates how solar energy is captured by plants, which are then converted into fuel. \$23.50.

McGraw-Hill. Sun Up to Sun Down: Understanding Solar Energy. Shawn Buckley. Nontechnical explanations of conduction, convection, radiation, thermal resistance and thermal storage, plus practical applications of solar energy. \$6.95, paper.

John Muir. The Food and Heat Producing Solar Greenhouse: Design, Construction, and Operation. Bill Yanda and Rick Fisher. A revised edition containing a graphic explanation of the principles behind a thermally efficient greenhouse, plus a guide to heating and food growth. \$8, paper.

Thomas Nelson. At Home with Solar Energy: A Consumer's Guide. David Dvorkin. A solar-energy guide written in understandable terms. \$5.95, paper.

Rodale Press. The Passive Solar Energy

The Art of Shelter

Book. Edward Mazria. Presents 27 design patterns demonstrating the conversion of a passive home solar-energy system to a structure that acts as its own collector without utilizing additional equipment. \$12.95; paper, \$10.95.

Scribners. Solar Houses for a Cold Climate. Dean Carriere and Fraser Day. Takes a holistic, ecological approach to solar-heated buildings and also offers case studies and an energy and resource checklist for the home. \$16.95.

Solar Heating: A Practical Guide for Design and Construction. Thomas Scott Dean and Jay W. Hedden. Prescribes methods for the design, construction and installation of liquid-cooled flat-plate collectors to provide both space and water heating for the home. \$14.95.

Sterling. Sunpower Experiments. Maggie Spooner. Constructing sundials and solar water heaters are among the experiments described, plus background data on the nature of sun power and the limits of its use. \$5.95.

Sunset. Sunset Homeowner's Guide to Solar Heating. \$3.95, paper.

Tab Books. How to Make Your Own Solar Electricity. John W. Stewart. Describes the use of silicon voltaic cells in converting sunlight into electricity. \$9.95; paper, \$5.95.

Adding Solar Heat to Your Home. Robert W. Adams. Step-by-step instructions on installing a solar-powered heating system. \$12.95; paper, \$7.95.

Making and Using Electricity from the Sun. By the technical staff of the Solarex Corporation. The whole story of the development of the voltaic cell and its increasing use in developing solar electrical energy. \$7.95; paper, \$5.95.

How to Make Home Electricity from Wind, Water and Sunshine. John A. Kuecken. A guidebook to home electric-power generators and systems describing the principles of solar power \$9.95; paper, \$5.95.

Ten Speed Press. The Solar Cat Book. James Augustyn. The author, an engineer with a California solar-design firm, mixes reality and fantasy in his explanation of solar energy and its uses. \$3.95, paper.

Van Nostrand Reinhold. Solar Cell Array Handbook. Hans Siegfried Rauschenbach. Current information relating to photovoltaic energy conversion technology for earth and space. \$24.50.

Successful Solar Energy Solutions. Spruille Braden III and Kathleen Steiner. Descriptions, drawings and photographs of buildings using solar energy in all areas of the United States; energy designs of the past 25 years; also includes the fundamentals of solar energy. \$24.50.

Solar Energy Utilization. Timothy I. Michels. How to make solar-design judg-

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John Wiley. The Solar Decision Book: A Guide to Heating Your Home with Solar Energy. Richard H. Montgomery with Jim Budnick. Covers planning, designing, financing and installation. \$12.95, paper

The Sun: Our Future Energy Source. David K. McDaniels. A history of solar energy that also examines space heating and cooling as well as solar electric-power generation. \$12.95, paper

Wood

Butterick Publishing. Heating with Wood. Editors of *The Family Handyman Magazine*. Explains how to select and use contemporary and antique wood-burning stoves and fireplaces. \$6.95, paper

Citadel Press. Heating with Wood. Michael Harris. Explains how to design or adapt a home to wood heating, from choosing and purchasing chainsaws, stoves, fireplace units and furnaces to collecting and storing wood ashes. \$12; paper, \$7.95.

Cornerstone Library. Wood Burning Stoves. George Sullivan. Information on choosing, installing and maintaining stoves, plus an examination of fireplaces and accessories. \$4.95.

Countryman Press. FireFacts: The Wood Heat Consumers' Guide. Jerry Kipp. Lists more than 250 related products with text on woodlot management, chain-saw use, and how-to-do-it instructions on installing and maintaining wood-burning units. \$9.95.

Everest House. The Art and Ingenuity of the Woodstove: A Book of History and Use. Jan Adkins. Includes a directory of woodstove manufacturers and retailers and descriptions of 163 types of wood-burning stoves. 12.95.

Fawcett Gold Medal. Wood Heat. Allan A. Swenson. An illustrated guide for cost- and energy-conscious homeowners on how to heat partially or entirely with wood. \$2.50, paper

Gabriel Books. Firewood: A Woodcutter's Fieldguide to Trees in Summer and Winter. M. Michaelson. Identifies U.S. trees and rates them according to their value as fuel. \$2.95, paper.

Garden Way Publishing. Wood Heat Safety. Jay Shelton. Covers installation of wood-heat equipment, as well as its operation and maintenance, with special attention to safety. \$8.95, paper.

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Vermont Crossroads Press. The Woodburners Catalogue. Designed as a resource for those searching for wood-burning products. \$5.95, paper.

Wind

Cheshire Books. The Wind Power Book. Jack Park. Covers wind-generated electricity as well as windmills for water pumping, mechanical power and home heating. \$14.95; paper, \$9.95.

Cornerstone Library. Wind Power for Your Home. George Sullivan. Explains how to exploit the wind's energy via do-it-yourself systems to elaborate wind-driven electric ones. \$4.95.

Domus Books. Wind Energy. Thomas Kovarik, John Pipher, John Hurst. Provides information on building one's own windmill. \$12.50; paper, \$6.95.

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University of Michigan Press. Wind Power and Other Energy Alternatives. David Rittenhouse Inglis. Explores a variety of energy sources, but leans toward the development of wind power. \$16; paper, \$8.50.

Van Nostrand Reinhold. Wind Machines, 2nd ed. Frank Reed Eldridge. The current technology and future possibilities of wind power, covering the history of wind machines from the earliest times to the present day. \$11.95.

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General

Beekman. Cutting Energy Costs. Richard Dick-Larkam. Looks at each major area of fuel usage and offers plans for reducing consumption or improving efficiency. \$24.95.

John F. Blair. The New River Controversy. Thomas J. Schoenbaum. Recounts the story of the Blue Ridge Project opposition, including the tactics and maneuvers employed to preserve the river from the dangers of a pump storage facility for generating electricity. \$12.95.

Dutton. Last Stand at Rosebud Creek: The Story of Eighteen People and a Power Plant. Michael Parfit. The true-story energy conflict in Rosebud County, Montana, where stripmining and energy plants are abundant. \$12.50.

Frederick Fell. Energy-Saving Handbook for Homes, Businesses and Institutions. Edwin Feldman. A conservation guide to the uses of electricity, natural gas, fuel oil, compressed gas, steam and water. \$9.95.

New York University Press. Environment, Technology and Health: Human Ecology in Historical Perspective. Merrill Eisenbud. Covers fossil-fuel combustion, automobile emissions, nuclear power and environmental cancer, among other subjects. \$19.50

Overlook Press. The Environmental Revolution. H.R.H. Prince Philip. A collection of 35 speeches covering conservation, the government role in social change and more. \$8.95.

Spectrum/Prentice-Hall. Energy Conservation and Public Policy. John C. Sawhill. Describes current energy options and shows how the choices made will affect future generations. An American Assembly Book. \$11.95; paper, \$5.95.

The Home

Arco. The Complete Energy-Saving Home Improvement Guide, 3rd ed. James W. Morrison. \$1.95, paper.

Atlantic/Little, Brown. From the Walls In. Charles Wing. Advice on how to retrofit an older home at an affordable cost while keeping energy conservation in mind. \$8.95, paper.

Ballantine. The Home Energy Guide: How to Cut Your Utility Bills. John Rothchild and Frank Tenney. A do-it-now plan book with a room-to-room guide for saving power; a state-by-state guide to government and industrial policies that affect utility bills; and advice on low-energy-consuming appliances. \$1.95, paper.

Butterick Publishing. Energy-Wise Cooking: Cut Energy Costs with These Sensational Recipes. Margaret Happel. A book of 200 recipes, with chapters arranged by appliance, aimed at combatting today's energy costs. \$3.95, paper.

How to Cut Heating and Cooling Costs. Peter Jones. Part of the new Home Environment Help Series, this book offers do-it-yourself projects aimed at reducing home energy losses by as much as 60% and fuel bills by half. \$4.95, paper.

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Garden Way Publishing. **Home Energy for the Eighties.** Ralph Wolfe and Peter Clegg. Discusses theory, technology and equipment for alternate energy systems: solar, wind, wood, water. \$10.95, paper.

Stephen Greene Press. **The Complete Book of Insulating.** Edited by Larry Gay. Reviews many aspects of insulation: how to do it, how it can provide tax credits and how much energy is required to produce various kinds of insulation. \$12.95; paper, \$7.95.

Harper & Row. **The Complete Energy Saving Handbook for Homeowners.** James W. Morris. Tells how to cut home heating and cooling costs. \$1.95, Barnes & Noble paper.

Holt, Rinehart & Winston. **Alternative Home Heating.** Dan Browne. Clarifies which alternatives to fossil fuels are effective for heating, with cost efficiency a main consideration. \$12.95; paper, \$6.95. August 1980.

McGraw-Hill. **All Through the House: A Guide to Home Weatherization.** Thomas Blandy and Denis Lamoureux. This architect-contractor team advises homeowners on choosing suitable weatherization. \$6.95, paper.

Putnam. **How to Beat the Energy Crisis and Still Live in Style.** Bill Baker. An interior designer and architect gives a step-by-step guide to energy-saving techniques for home and apartment. \$12.95; paper, \$6.95.

Reston Publishing. **Inflation Fighter's Big Book: Beat the High Cost of Operating Your Home.** Carmen and Brownlee Waschek. Energy alternatives are explored and applied to different parts of the country. \$12.95.

Rodale Press. **Making Your House Weathertight with Moveable Insulation.** Bill Langdon. Contains how-to information for the house, greenhouse and any other living or working space. \$12.95; paper, \$9.95. April 1980.

Spectrum/Prentice-Hall. **Your Energy-Efficient Home: Improvements to Save Utility Dollars.** Floyd Hickok. Deals with insulation, solar energy, circulation media, etc. \$11.95; paper, \$4.95.

Structures Publishing. **How to Cut Your Energy Bills.** Ronald Derven and Carol Nichols. An updated, revised edition of a 1976 title includes an energy checklist for homeowners.

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Sunset. **Insulation & Weatherstripping.** \$2.95, paper.

Vermont Crossroads Press. **Handmade Hot Water Systems.** Art Sussman and Richard Frazier. How to build a hot-water system fueled entirely by wood and/or solar energy. \$4.95, paper.

Transportation

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Domus Books. **The Complete Book of Electric Vehicles.** Sheldon R. Shackel. Electricity can lessen our dependence on gasoline and other fuels, according to this book. \$14.95; paper, \$7.95.

Fawcett Special. **Gas Savers Guide.** By the editors of *Consumer Guide*. A cartoon-illustrated guide with gas- and money-saving advice on driving and maintaining one's car. \$1.95, paper.

Love Street Books. **Forget the Gas Pumps—Make Your Own Fuel.** Jim Wortham and Barbara Whitener. With a permit, anyone can make moonshine, say the authors, and with proper adjustments, a car can be converted to run on it. \$3.95, paper.

ARCHITECTURE

Addison House/Reed Books. **The Alternative House: A Complete Guide to Building and Buying.** Rita Tatum. An examination of alternative housing methods from solar houses, pre-engineered houses and log cabins to mobile homes, plus a regionalized list of sources and manufacturers. \$12.95; paper, \$6.95.

Brick House. **Something New Under the Sun: Building Connecticut's First Solar Home.** Ruth F. Frank. How to build a solar "dream house." \$8.95.

CBI Publishing. **Graphic Standards of Solar Energy.** Spruille Braden III. A graphic reference guide to incorporating energy-conscious design into all types of buildings: residential, commercial, and institutional. \$19.95.

Dutton. **How to Build Your Own Energy-Efficient Home.** Hugh Laidman. Twenty-three energy-efficient house designs with do-it-yourself, money-saving hints. \$14.95; paper, \$8.95. June 1980.

The Complete Guide to Factory-Made Houses. A. M. Watkins. Examines houses from the modular to the mobile, with information on energy requirements and using passive solar energy. \$15.

Garden Way Publishing. **At Home in the Sun.** Norah Deakin Davis and Linda Linsey. A tour of 31 solar homes around the country with notes on cost and design, details on what worked and what didn't. \$9.95, paper.

Designing and Building a Solar House. Donald Watson. \$9.95, paper.

International Scholarly Book Services. **Solar Architecture: Process, Architecture No. 6.** Edited by Ching-Yu Chang. An overview of existing and future applications of solar energy in the architectural process, with illustrated examples of solar house designs. \$19.95, paper.

Pantheon. **Solar Houses: 48 Energy-Saving Designs.** Louis Bropp. Shows what a solar lifestyle involves in 48 homes around the country. A House & Garden Book. \$15.95; paper, \$8.95.

Pilgrim Press. **The Energy-Efficient Church.** Edited by Douglas R. Hoffman. Offers effective energy plans for the church. \$4.95, paper.

Rodale Press. **A Design and Construction Handbook for Energy-Saving Houses.** Alex Wade. Contains specific information on designing, financing and constructing the energy-efficient and sun-tempered house. \$15.95.

Village Homes' Solar House Designs. David Bainbridge, Judy Corbett and John Hofacre. Includes floor plans, photos and text on 43 energy-efficient, solar-heated, middle-income homes that are part of one of America's first solar subdivisions. \$6.95, paper.

Sierra Club Books: **The Integral Urban House: Self-Reliant Living in the City.** By the Farallones Institute. How-to information for the city dweller based on the results of an existing Berkeley house that it is claimed cut energy use by more than 65% and recycles 90% of its wastes. Includes diagrams, maps, working plans. \$12.95, paper.

Sterling. **Underground Houses: How to Build a Low-Cost Home.** Robert L. Roy. The author describes how he built his own subterranean home and examines its energy-saving advantages. \$5.95, paper.

Van Nostrand Reinhold. **Earth Sheltered Housing Design.** By the Underground Space Center, University of Minnesota. Plans for underground homes that utilize soil insulation, passive solar heating and specific natural surroundings. \$17.95; paper, \$9.95.

Natural Solar Architecture. David Wright. How to use today's technology and modern building materials to optimize passive solar potential. \$14.95; paper, \$7.95. □

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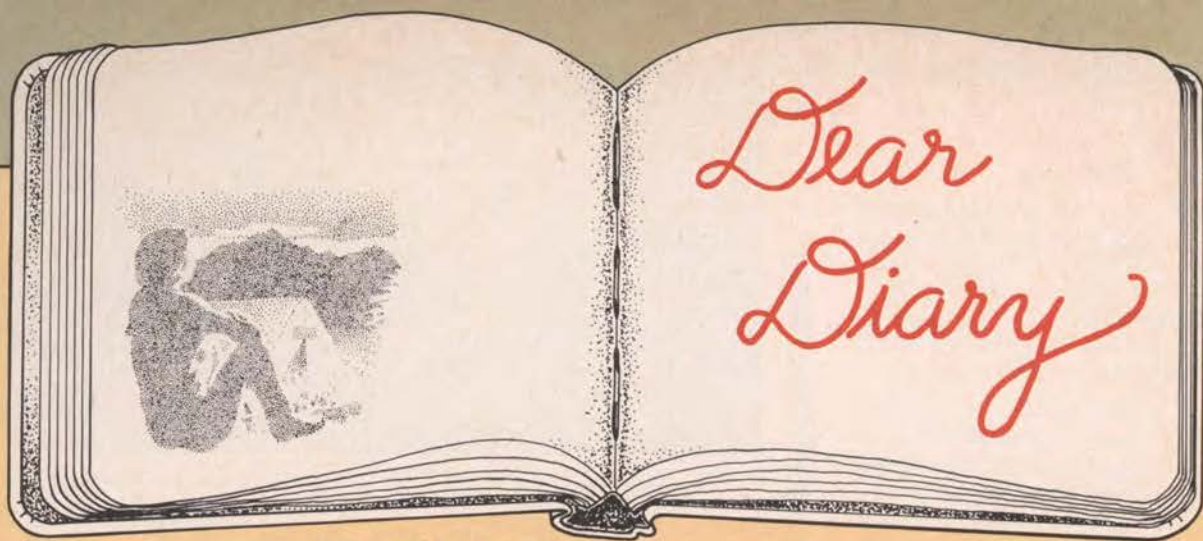
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WENDY DRESKIN and BART EISENBERG

Monday. You won't believe what I've gotten myself into. This morning Mom told me she and Dad are planning a backpacking trip for the July 4th weekend. I knew that would mean I'd get left with old Aunt Clara again, so I told Mom I was big enough to go this year. I said I really *wanted* to go. So Mom said she'd talk it over with Dad, and this evening they told me I'm going with them.

Wednesday. Our plans are moving really fast. Backpacking means carrying your house on your back—your bed, stove, food, water and clothes. Mom said my old sleeping bag was too heavy for backpacking. The new one we bought is filled with feathers, and it stuffs into a little sack. Dad's stove is so small you can hold it in one hand. But when it's turned on, it sounds like a blowtorch.

For clothes, Mom said it's best to dress in layers; so I packed a T-shirt for when it's sunny and a sweat-shirt and wool sweater for when it's cooler. At night, I can wear all three. The bottom of my pack is filled with socks—when you're walking all day, you've got to be kind to your feet.

When the pack was filled, I tried it on. It was heavy to lift, but after I put on the shoulder straps and the waist belt, it felt fine. Dad had me stand on the scale and said I was carrying 25 pounds. "May I take my diary to write about the trip?" I asked. Mom said I can if I carry the book myself: 25½ pounds.

Mom and Dad will carry most of the food. Some of it is dried and looks funny and shriveled, but it will turn out fine when we add water. Dad says that in the woods even your shoes taste good. At home, Mom says marshmallows are "junk food," but she packed a bag of them for toasting at the campfire. I helped make a bag of "gorp"—we mixed peanuts and chocolate chips and raisins together. I wanted to eat some, but Mom says it's only for the trail. She said we'd get fat if we sat around and munched it.

Saturday. We left this morning for the mountains. The first part of the drive was all highway—we passed rows of fruit trees and crops, cows, barns and small towns. Then the road led into the mountains. As we got higher, we saw more and more tall trees until we were in a forest.

When we got to the trailhead, where our hike was to begin the next morning, I thought I'd get to play and look around. But no way. Mom and Dad wanted to set up camp before dark, so I had to help unload the car and unroll the sleeping bags and all that. Dad thinks he's still in the Army.

We cooked dinner on the little stove. Tonight, anyway, there's no worry about what to do after dinner. I'm tired!

Sunday morning. I didn't have to get dressed this morning because I slept in my clothes. If I could do that at home, I could sleep later.

I washed far back from the stream. The water could wake the dead, it was so cold—but it tasted wonderful. Mom says it's better than wine. She saw this little bird on a rock and got all excited. Dad came running with binoculars, loudly whispering, "That's a life bird!" That means he's never seen that bird before in his whole life. They keep a list of all the bird species they've seen, and when they find a new one they check it off and act silly.

While they were watching the bird, I started exploring and found these really neat orange flowers by the stream. They were taller than I am. I know a few flowers from day hikes, but I never saw any like this. I also saw lots of tall trees, two lizards and a hawk. I get the feeling here that we could walk for miles and miles and never see a road or a car or even another person. You could walk for miles and still be in the mountains.

Mom and Dad came back and said the bird was a dipper. I said, "I think I found a 'life flower.'"

They laughed and came to look and said it was a leopard lily.

Mom and Dad have been packing up while I'm writing. Now we're ready to go.

Sunday lunch time. This is a rest stop, and do I need one! At first it seemed Mom and Dad were going too slow. I was up ahead of them, and they kept telling me to slow down.

Then after a while the pack started hurting my shoulders and my feet hurt. I asked Mom how far we'd gone, and she said only about two miles. Only two! That could take two minutes in a car, and we've been walking for years. Mom told me that as I hiked more I'd get stronger. She said I'd soon turn into a horse.

Sunday after dinner. It really felt good to take off my pack and boots. I walked four and a half miles today. I'm glad we came this far; I really love our campsite. The pine trees make little rooms with pine-needle carpets. I've already picked out one I want to be my bedroom.

We found a place away from the lake to be the bathroom. Dad put the shovel there and hung a roll of toilet paper on a twig. He reminded me to dig a hole about six inches deep and to bury all the paper.

We went for a swim in the lake. The mud by the shore was all warm and squishy between my toes. No one else is here—it's like a big, private swimming pool.

Then Mom got out the field guide, and we started looking at flowers. I saw three I knew: Indian paintbrush, lupine and yarrow. Mom showed me a new one with a pretty name—skyrocket gilia. I never saw it before because it grows only at high elevations. Another "life flower" for me!

After supper Dad said, "It's time for one of the most important parts of backpacking." He looked very serious.

"What's that?" I asked.

"Sunset watching. We must pay our respects to the setting sun." So we all climbed up a rocky hill behind our campsite, and when we got to the top we turned around and sat down. I could see our tent and, just past it, the lake. In the distance, the white clouds turned colors; first yellow, then orange and pink, and finally—a little bit later—they turned purple. We all sat quietly, just watching and listening to the wind,

and I felt warm and peaceful inside.

When we got back to the camp, Mom made a fire. We toasted marshmallows and sang songs that echoed in the distance. Dad said the sound was bouncing off that rocky hill we climbed.

That night the sky was filled with stars, thousands of them that you can't see from where we live because of the city lights and the pollution in the air. Mom pointed out the Big Dipper, the Little Dipper and the North Star at the end of the Little Dipper's handle. Dad said that all the stars slowly revolve around the North Star.

I also saw a shooting star. Sometimes, when there are "star showers," you can see a shooting star every minute or so—all coming from the same place in the sky. In the distance, there was the sound of a coyote. Mom said he was singing to us.

Monday. This morning we left our packs and hiked up to where there was snow. It was funny to have a snowball fight in July.

So far, I'd seen five deer and lots of chipmunks. Then this afternoon, when we were hiking out, Dad grabbed my arm and pointed. I saw a funny looking dog splashing in a stream. Its hips were higher than its shoulders, and it walked funny. And then I knew—it was a bear cub! We watched it from a distance as it waded. Then it stepped out of the stream and walked up the hillside and out of sight. The rangers say the bears that live here should be given a lot of room. Still, a wild bear seen from far away is much more exciting than one in a zoo seen up close. I guess the bear was the highlight of the trip. I was sad, though, because it was time to leave. We hiked down the trail to the trailhead. Our car was the first machine I'd seen in a while. When Mom started it up, the motor sounded strange.

Tuesday. We're home. I called my friend Chris.

"You missed a really great movie on television Sunday night," Chris said.

"Did you happen to look out the window Sunday night?" I asked.

"No," said Chris. "Why?"

"Well," I said, closing my eyes and remembering how the sunset turned into stars, "you missed a really great show Sunday night!" □

Wendy Dreskin and Bart Eisenberg are free-lance writers and backpackers.

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The Sierra Club Annual Dinner

The Sierra Club Annual Dinner will be held on Saturday, May 3, at Hs Lordships restaurant in Berkeley, California. The social hour will begin at 6:30; after dinner, the main speaker will be James W. Moorman, Assistant Attorney General of the United States—and former head of the Sierra Club Legal Defense Fund. Tickets are \$10 each. Please send your check and a self-addressed, stamped envelope to: Sierra Club Annual Dinner, 530 Bush Street, San Francisco, CA 94108. Requests should be received by Friday, April 25.

Reports from the Grassroots

News of chapters, groups and members across the continent has filled my mailbox but, for lack of column space, many items have been tucked away in a hold-for-the-future file. At last the future has arrived—it's time for a wrap-up of reports from the Club's grassroots. Here are some of the stories that need telling.

Gas-miserly outings are on the increase. Trips that conserve fuel not only combat the rising costs of transportation by car, they also demonstrate the energy-efficient alternative ways to reach some parks and wild areas. A number of chapters and groups are promoting bus or Amtrak travel to trailheads.

Club members in Minnesota's Twin Cities can ride local buses to some twenty regional parks. Last fall the North Star Chapter, in its newsletter, the *Sierra North Star*, published a full-page schedule of buses to the parks. Also last fall, the Angeles Chapter's *Southern Sierran* gave detailed instructions on how to reach five southern California trailheads by riding Los Angeles Rapid Transit District buses. Take number 487, for example, from downtown L.A. to Sierra Madre Boulevard, then walk a few blocks to the trail to Mount Wilson.

If you had joined the Long Beach

Group's autumn outing to Torrey Pines State Park, just north of San Diego, you would have boarded the 9:05 A.M. Amtrak train at Fullerton for an effortless, 80-mile ride down the California coast. The eight-mile hike began after a 10:30 arrival at the Del Mar station.

The San Diego Chapter bus-pooled last Labor Day weekend on its most fuel-efficient outing yet, achieving a remarkable rate of more than 300 passenger-miles per gallon of fuel. Actually that outing was three outings. The leaders—Mike Fry, Pete diGiolamo and Ed Pease—chartered one bus to transport the 45 people on three outings to their common roadhead in the Sierra Nevada west of Bishop, California.

Sierrans Make News

Nebraska Chapter Chairman Bob Warrick was honored last September by the Nebraska Wildlife Federation. He received its Conservationist of the Year Award for his work to protect the fragile sandhills of Nebraska and his efforts for wildlife and natural-resource conservation. Warrick, a Meadow Grove farmer who also chairs the Lower Elkhorn Natural Resources District, was nominated by his fellow Sierra Club chapter member Robert Steffen, who himself received the Wildlife Federation's first award in 1975.

Last summer, New Jersey Chapter activist Carol Barrett received the federal Environmental Protection Agency's Special Award of Merit in recognition of her leadership in virtually every significant environmental issue in southern New Jersey, and particularly in "developing and gaining acceptance for the 'Sierra Club Compromise' on the makeup of the Pinelands Planning Entity." Barrett, who founded and currently chairs the West Jersey Group's conservation committee, has worked indefatigably to keep alive the issue of environmental protection for South Jersey's 1500-square-mile Pine Barrens. Largely through her efforts and those she inspired, a fifteen-member

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The Sierra Club, The Sierra Club Foundation and the Sierra Club Legal Defense Fund, Inc., have received gifts in memory of the following people:

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Elsie Fracaro	Peggy Ann Leach	Allen Walter
Charles Funk	James Lennart	Mildred Winslow
Roger Gleng	Robert E. Lewis III	Donald B. Witherell
Arthur Gowan	Veda Linford	Betty Wolford
Jane Griffin	Rachel Makower	

Between June 1 and December 31, 1979, gifts were made to the Sierra Club, The Sierra Club Foundation or the Sierra Club Legal Defense Fund, Inc., in honor of the following people:

Mrs. Janice Allen	Mr. and Mrs. Paul Sakel
Rollin and Grace Enfield	E.C. and M.J. Sargent, Jr.
Robert Holscher	Preston Sargent
Olive "Ollie" Mayer	Michele and Steve Saunders
David Robbins	Peter and Rosa Sternberg
William Morgan Roush	Kent Young
Allison and Ola Saether	

The Sierra Club Foundation has established, with the approval of Mrs. Douglas, a fund in memory of her late husband, Supreme Court Justice William O. Douglas. Contributions may be sent to the Sierra Club Foundation, 530 Bush Street, San Francisco, Ca. 94108.

Pinelands Commission now subjects to environmental review any proposed development in that vast area.

On December 1, Jane Elder held a "wake/celebration" in the Mackinac Chapter's office in Lansing, Michigan. The occasion: her move to Wisconsin's capital, Madison, where she now works as an assistant representative in the Club's Midwest Office. Elder had been the chapter's field representative, working on Michigan environmental and conservation issues with the 3700 members in the chapter's ten regional groups.

Tina Nappe, editor of the Toiyabe Chapter's newsletter, *Toiyabe Trails*, has been appointed to the Nevada Board of Fish and Game in recognition of her efforts to promote wildlife conservation.

The Sierra Club's executive director, Mike McCloskey, has been appointed by President Carter to a 50-member, nonpartisan, independent commission to draw up a national agenda for the 1980s. The commission, with a staff of 30 and a budget of \$5 million, is to issue a report by the end of 1980.

Kris Sigford hasn't won an award nor has she been appointed to any board recently, but she is doing a whale of a job for the North Star Chapter and its hard-hitting Project Environment. Employed as the 3100-member chapter's administrative assistant, Sigford wears three hats. First, she puts in about 12 hours a week on chapter work, mostly on maintaining the membership list. (Members are typically between 25 and 40, she says, and they move a lot—ten times more often than do Audubon Society members.) The rest of her time is split

Corrections

An unfortunate typographical error appeared in "Finding the Lost Coast," in the January/February *Sierra*. The statement that "[T]oday's loggers . . . can cut . . . old-growth stands—on slopes as steep as 95 degrees" should have read 95% (as measured by a clinometer on a State Board of Forestry field trip).

Eric Salzman's review of *The Beaches Are Moving*, by Wallace Kaufman and Orrin Pilkey, originally appeared in *Not Man Apart*. *Sierra* reprinted the review with NMA's permission.



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between the chapter's well-funded and effective lobbying arm, Project Environment, and the Project Environment Foundation, an independent, tax-exempt corporation founded in 1974 to influence nonlegislative environmental decisions in Minnesota. The major current focus of the foundation's efforts is the legal defense of the Boundary Waters Canoe Area. A lawsuit has been brought against the BWCA by mining and forest interests as well as by property owners in the vast federal recreation area in northern Minnesota; Sigford helps orchestrate the work of a team of volunteer attorneys, and she helps coordinate fundraising.


Celebrations

Earth Day '80, April 22, marks the tenth anniversary of the original Earth Day. Environmental events all around the country will be coordinated by a new organization, also called Earth Day '80, whose focus will be local environmental projects and events. Since the 1970 celebration, the American people have not wavered in their strong support for improvement and protection of the environment, but as Brock Evans, the Club's associate executive director, comments, many politicians and members of the media do not seem to believe it. Here's an opportunity to demonstrate your support publicly. If you would like to plan a program in your own area, write for details from Richard Kinane, Earth Day '80, 1001 Connecticut Avenue, N.W., Fifth Floor, Washington, D.C. 20036.

The Year of the Coast, a 1980 celebration to which the Sierra Club is lending strong support, will draw public attention to the value of protecting and enhancing the U.S. coasts. Such grassroots activities as wetlands tours and beach cleanups are planned, and the Club has brought out a new full-color sound film, "Coasts for the Future, Saving America's Shores." The footage was originally shot in 1972 to document the environmental case for Proposition 20, the California Coastal Protection Act, which won overwhelming approval that November. Re-edited, the film illustrates conditions on virtually any coastline, according to Larry Dawson of the Club's film program. The ten-minute film can be rented for \$9 plus a shipping charge, and can be purchased for about \$150. For complete details and ordering instructions on all Sierra Club films, write the Sierra Club.

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NEWS

Senate Delays Alaska Bill; Andrus Acts

In a move that shocked conservationists, the U.S. Senate agreed to delay debating and voting on the Alaska National Interest Lands Conservation Act until, at the earliest, July 21. Alaska's two senators gloated to the press that this delay would give them the chance to filibuster to death any House-Senate conference bill they don't like. Chuck Clusen, chairman of the Alaska Coalition, said this delay and election-year time pressures would make it difficult, if not impossible, for a House-Senate conference to achieve an acceptable bill.

On February 12, Secretary of the Interior Cecil Andrus announced that, in view of the Senate delay and the clouded prospects for an acceptable bill, he had taken final action on Public Land Orders to establish 40 million acres in Alaska as 13 new National Wildlife Refuges (and four other areas in related categories). These are lands he had previously withdrawn under temporary protection, and they are in addition to the 56 million acres of National Monuments President Carter established in Alaska a year ago.

"The Carter Administration and Secretary Andrus—who plans to retire at the end of this year—have earned a unique place in conservation history for their tireless actions to preserve Alaska's wildlands," said Sierra Club Executive Director Michael McCloskey. "We still hope there can be a final Alaska lands bill in 1980, but these moves assure that this land is protected if Congress cannot pass an acceptable bill." In a telephone call to McCloskey, President Carter told conservationists that high standards would be maintained for approval of any Alaska lands bill. The President, McCloskey said, "assured me that he will not sign an Alaska lands bill which does not, taken as a whole, match the protection that can be assured through executive action."

Groups File Petition to Protect Bryce Canyon

Three environmental groups—the Environmental Defense Fund, Friends of the Earth and the Sierra Club—have filed a petition with the federal Office of Surface Mining Reclamation and Enforcement to prevent stripmining near Bryce Canyon National Park. The petition was filed jointly with seven farmers and ranchers residing near the southern Utah park.

The proposed Alton mine, about three miles from the park's southern boundary, would be one of the largest in the country, producing an average of 10.5 million tons of coal a year to fuel the proposed 2500-megawatt Allen-Warner Valley Energy Sys-

tem planned for Nevada and southern Utah. The stripmine would be visible from Yovimpa Point, one of Bryce's principal overlooks.

William Curtiss, staff attorney with the SCLDF, said, "Surface mining here will affect local farmers and ranchers as well as Bryce. Many of these people have lived on the land for generations, using streams, wells and springs to water their livestock and irrigate their crops. Reduced flows and polluted water caused by mining operations threaten their livelihood."

Carter Approves \$1.6-Billion Oil Pipeline

In an effort to speed supplies of Alaskan crude oil to midwestern refineries, President Carter recently approved plans for construction of a 1500-mile "northern tier" pipeline. The \$1.6-billion scheme would bring oil by tankers from Valdez, Alaska, to Port Angeles, Washington, where a tanker terminal would be constructed. The oil would then go by pipeline to Minnesota, where it would be distributed to refineries. Carter chose this plan over others because its route lies entirely within U.S. borders.

Residents of the Puget Sound area object to the plan. "We don't like the idea of increased tanker traffic down the coast," said Shirley Duncan, a Club leader in British Columbia. Citizens of Port Angeles and of western Montana, along the pipeline route, are also apprehensive about the plan.

Despite Carter's approval, construction of the pipeline is far from certain. If the Northern Tier Pipeline Company, a consortium of nine firms, is unable to obtain the necessary \$1.6 billion, Carter will choose from among three alternative plans. One alternative is to construct an oil pipeline parallel to the Alcan Gas Pipeline endorsed by the U.S. and Canadian governments in 1977. Other solutions suggested by environmentalists include retrofitting West Coast refineries to process increased amounts of Alaskan oil, and developing a Canadian-U.S. oil-exchange program.

A New Effort for the Porcupine Caribou

Canada and the U.S. are negotiating a treaty to protect the Porcupine caribou herd, and environmental groups are organizing to support and strengthen the treaty and to urge balanced resource management in the North. Representing the many concerned groups, the Arctic International Wildlife Range Society is supporting protection for the herd and its ecosystem and has begun publishing a monthly newsletter and sponsoring environmental research. For more information, contact Nancy Russell LeBlond, 305-2233 Allison Rd., Vancouver, B.C., Canada V6T 1T7, (604) 988-3513.

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