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THE SIERRA CLUB BULLETIN

JULY AUGUST 1979
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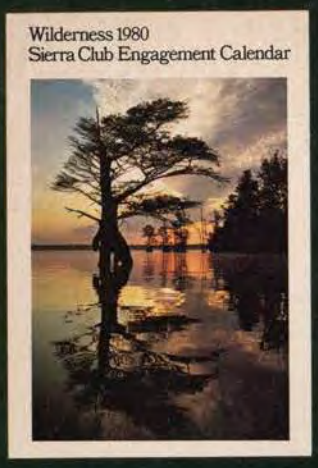

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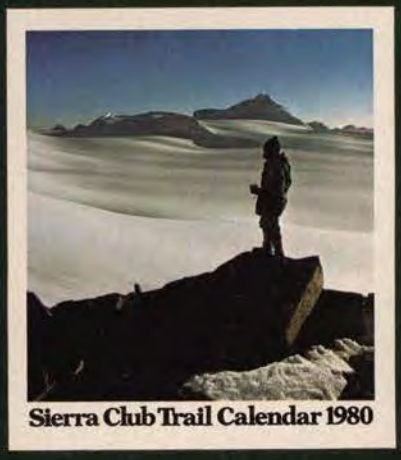

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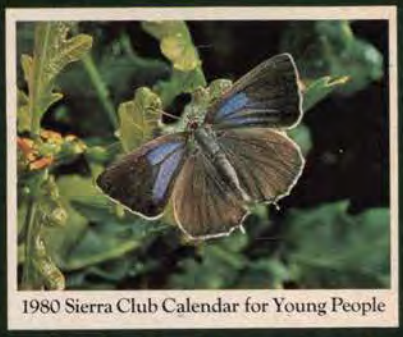

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These beautiful calendars and new books from the Sierra Club may be ordered on page 24.

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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JULY/AUGUST 1979 **VOLUME 64/NUMBER 4**

Cover: Old Faithful, Yellowstone National Park. Photograph by David Sumner.

Playthings of the Idle Rich

Senator S. I. Hayakawa (R-California), speaking to the Republican State Central Committee, had this to say *(San Francisco Examiner,* February 18): "There is an essential conflict between the wealthy who can afford to fight for environmental safeguards and poor people who are fighting for space. You don't see many black people in the Sierra Club."

As a club member it angers me to see environmental issues portrayed as the playthings of the idle rich and as opposed to the well-being of minorities and the poor. Unless we deal with this misconception directly, it can be very damaging! How does the Sierra Club counter this kind of distortion?

Russ Hickman
San Francisco, California

The Sierra Club has, indeed, been concerned with this misconception. See the article on "City Care," page 25, and "Second-Guessing Environmentalists," page 58.—*The Editor*

Farallons Pollution

I had only just read *Sierra's* splendid short article, "The Farallons," by Tupper Ansel Blake (October/November/December 1978), when I came upon a reference to these islands in *The Progressive* ("Nuclear Burial Ground," by Norman Solomon, April 1979). Your article draws attention to the dangers to which the Farallons are exposed from oil-tanker traffic and drilling on the continental shelf but makes no mention of contamination from nuclear wastes. I quote *The Progressive:* "At sea, enormous mutant sponges have grown around leaking waste barrels in San Francisco Bay; at the Farallon Islands off the California coast, an Environmental Protection Agency study found that about one-quarter of 50,000 waste containers ruptured during the 20 years they had been lodged in the Pacific Ocean."

Hardly a day passes that we don't hear of old failures and unresolved crises going back 20 years and more, of which we heard not a word during all those years when the news of technology was nothing but good. It seems to me very important that all such instances of this sort of ineptitude and dissimulation be given the widest possible notice. Ignorance is not bliss. It is better to know.

Gail Hammond
Chattanooga, Tennessee

Extra-High Voltage

I've been fighting the construction of an 800-kilovolt direct-current transmission line in Minnesota and North Dakota. The article in the July/August 1978 *Sierra* entitled "Health and High Voltage" and the letters in reaction in the January/February *Sierra* were of extreme interest.

At the condemnation hearings to take our land away, the chief electrical engineer of the United Power Association (the cooperative that has built the 800kV dc line) told us the power line would be virtually harmless, much as did W.R. Johnson, chief electrical engineer of Pacific Gas and Electric Company, in his letter published in the January/February issue. Since the completion of UPA's 800kV power line, it has been tested periodically; there are a number of effects.

The strongest effects seem to be not right under the line, but from 200 to 400 feet on each side. There is a dairy farmer near me whose milking machines' electrical pulsators won't work because they are within 400 feet of the lines. These same pulsators work fine on a neighbor's property, farther from the lines. A friend whose land is west of mine had to quit working his land while the line was tested because of the headaches he got. Many people have gotten headaches from being close to the line.

We've noticed that the many deer around here don't cross the land under the line as they used to. Cows and farm animals won't go close to the line very often, so pasture is wasted. Many animals are nervous; according to studies, their production is affected. The line creates constant noise out here on the quiet prairie. The sound can run as high as 60 decibels, comparable to the noise level of a dishwaster in the kitchen.

After months of study and lots of money, the Minnesota Health Department determined that many questions remain unanswered and need further study. The health department requires the cooperative to ground all fences and buildings near the line, suggests grounding vehicles under the line, and tells school buses not to stop underneath it. The cooperative refuses to accept liability for the line.

John Kooiman
St. Cloud, Minnesota

Car Subsidies

I feel I must comment on "The Case of the Hidden Car Subsidies" (October/November/December). Mr. Hart exaggerates and omits facts in an attempt to show that the private automobile is subsidized by property-tax payers. However, a more complete analysis of the sources of revenue of a city may in fact show that the opposite is true. Mr. Hart lists only two sources of income from automobiles. He should also have included the following:

- fees from city-owned parking lots, garages and metered spaces;
- fines from parking and traffic violations;
- sales or use taxes collected on new and used cars;
- taxes collected on the sale of parts, oil, antifreeze, gasoline and other automotive products;
- property taxes paid by automotive-related business.

In addition to these direct taxes, there are indirect taxes. For example, the people employed by automotive-related businesses generate taxes by the money they spend in the community.

From my vantage point in Wyoming, I cannot estimate how much revenue all the above-listed taxes would produce, but it certainly seems as if it would be

much more than $9.4 million.

Unfortunately, Mr. Hart also uses other arguments that are invalid. He implies that streets, street lights, drainage systems, police departments, the court system, hospitals and other institutions owe their existence to the private car. But we all know that every one of these existed long before the automobile was invented. At another point in his narrative he shifts the focus of his discussion from Pasadena to Los Angeles. He notes that 4200 welfare recipients in Los Angeles would be employed given adequate public transportation. This statement, while interesting, has nothing to do with the discussion of taxes paid or not paid in Pasadena. Moreover, it does not take into account the number of people who would be unemployed or on welfare if there were no private cars. (I do not claim there would be more people on welfare if we did not have cars or had fewer cars, but it is something that must be considered.)

Finally, Mr. Hart blames the automobile for keeping poor people poor. However, I think anyone would agree that most people will buy a car if they can afford it because of the freedom it gives.

Raymond E. Smithson
Laramie, Wyoming

Stanley Hart replies:

Mr. Smithson is partly correct, in that some items of income were overlooked in my brief analysis of the Pasadena budget. But I similarly neglected expenses that rebalance the scales. When the extra items of income and expense are included in the analysis, the results are close to my original conclusions.

Fees from parking lots, garages and metered spaces do not appear in the budget. These facilities are furnished free to city employees and others, a common practice in the area; and the city does not operate parking meters. Parking and traffic fines come to $200,000 and are included in my totals, though not labeled in my article. Sales and use taxes on auto and parts sales I estimate to be $822,000; and property taxes paid by auto-related business are about $470,000, for a total of $1,292,000.

Offsetting expenses are debt service for two parking garages ($158,400); debt service for the Pasadena Center parking facilities ($556,000); New Year's Day police services ($88,000); the fire and police retirement system ($186,000); and Rose Bowl paving ($90,000) for a total of $1,079,000.

No doubt many expenses and income items remain buried in the budget. The most obvious ones increase the cogency of my argument. For instance, $4 million is budgeted for housing development and $2 million for the city library—both sums include substantial amounts for parking facilities. The recent construction of a freeway through the city reduced the property value on Pasadena's tax rolls by 10%, an amount that had to be shifted to the tax bills of the remaining taxpayers. My estimates do not include these items. My analysis may be on the rough side, but it is always on the conservative side as well.

Mr. Smithson's views may be influenced by his experience with Laramie (which has an area of 9.5 square miles and a population of 23,000, at an elevation of 7170 feet). Possibly, automobiles in Laramie are an unalloyed delight. Here in Los Angeles (which has an area of 1800 square miles and a population of 8,000,000, at an elevation of 300 feet), we're not so delighted. For good reason, I have assumed Pasadena roughly typifies the jigsaw puzzle of 70 communities that carpet our basin; my reference to Los Angeles' problems was not unreasonable in context.

I do *not* argue that hospital, coroner, police, fire and court services owe their entire existence to the motoring public. I *do* argue that these services are far more extensive than they would be without the automobile—and that the motorist should pay the increment. I agree that automobiles provide employment, but I insist that an effective transit system would also offer employment as well as transportation opportunities for many (at least in Los Angeles) who cannot now get to jobs. Streets and drainage systems are another matter. Since the motorist now preempts our streets to the exclusion of all alternatives, it seems reasonable to ask the motorist to pay for them.

The use of property-tax funds to subsidize cars is widespread; it was one of the important causes for the success of California's Proposition 13. Please note that my figures do not include compensation for the pollution of Los Angeles' air (presumably not a problem in Laramie) or an adequate payment for the use by motorists of Pasadena's real estate (6.8 of the city's 17 square miles). □

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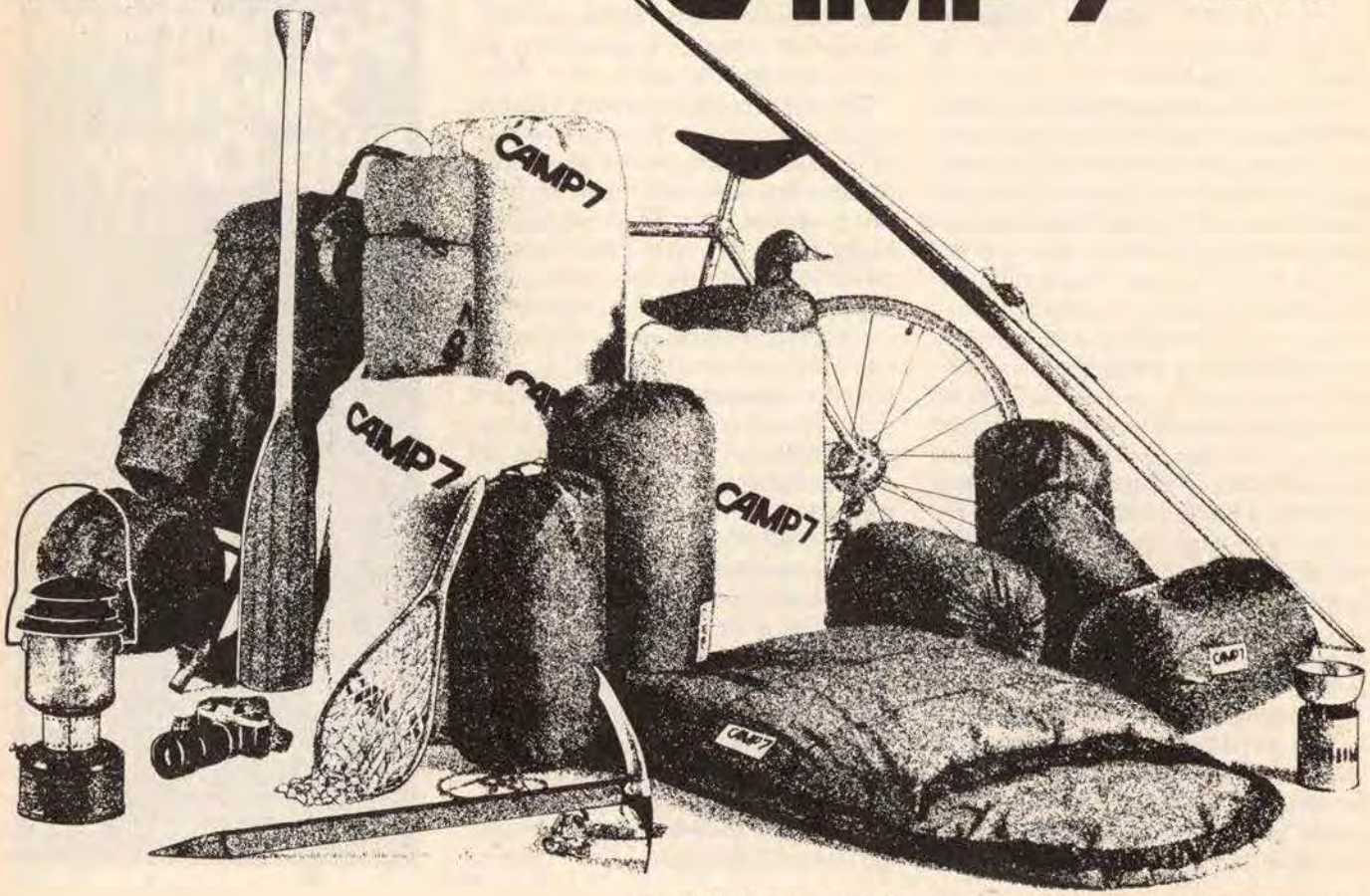

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Editorial

On Antarctica

PATRICIA J. SCHARLIN

THE WORLD energy hysteria may reach Antarctica this fall, if the thirteen nations that "manage" the continent continue to move in the current direction. Preparations are under way for a September meeting of the Antarctic Treaty nations that will consider setting up a "regime" to manage the development of mineral resources on the Antarctic continent. So far, no serious attention is being given to postponing development and setting Antarctica aside for the foreseeable future as a "world preserve."

The Sierra Club and other environmental groups are distressed that no detailed environmental impact analysis will have been prepared before the discussions take place. They sent a letter to President Carter in April urging that he take a stand on this issue and asking that the government consider the option of a world preserve. A preserve would not rule out development forever but would keep that choice open for a later time when the world may desperately need certain mineral resources for vital uses such as pharmaceuticals. Establishing a preserve would also provide the opportunity to learn more about how the ecosystems of the Antarctic work so that environmental standards could be established for future exploitation. Environmentalists believe that a preserve would also be the best means of reinforcing the principles laid down in the Antarctic Treaty of 1959, which set the continent aside for peaceful purposes and international scientific cooperation.

Although scientists are uncertain about the amount and quality of oil and gas on the continental shelf, and of coal and other minerals on the continent itself, commercial interests appear ready to search seriously. Scientists predict it will be technically possible to begin oil and gas development within 15 to 20 years, though at great economic cost.

The fragile nature of the whole Antarctic region has generated grave concern in the environmental community about this recent emphasis on resource development. Any major land-based exploration could cause significant ecological damage in a region of extreme weather conditions and fragile terrain. Offshore oil and gas exploration in treacherous, iceberg-ridden seas could result in accidents that would seriously affect the rich sea life. Environmentalists are worried that attempts to set up an arrangement to begin oil development might seriously strain the delicate understanding reached by the Antarctic Treaty signatories, who have agreed to neither assert nor recognize territorial claims—some of which overlap. A breakdown of this formula could move Antarctic discussions into a wider political arena of nations that have long viewed Antarctica as part of the world's common heritage, open to all. This could lead to a free-for-all in the race to develop resources for narrow national interests.

Why protect Antarctica? The reasons are clear. Its ocean currents, atmosphere and massive ice cap affect global climate and influence the life in virtually all the oceans. The area where most of the exploration would begin—the Antarctic peninsula—is especially fragile. This is where all the political, environmental, scientific and development activities converge. Moreover, several nations have conflicting territorial claims in the peninsula area. It contains most of the exposed soil area of the continent and is, consequently, where most plants and animals live. The continental shelf waters where oil and gas development would first take place contain important living resources, especially krill, a small, shrimplike creature that is a basic food for whales and other Antarctic wildlife (and a possible source of protein for a food-hungry world). Two thirds of the world's whale population are found off either side of the peninsula, as are many seal species, penguins and other birds that are tied to the land. One cannot dismiss the potential impact of development on the rest of the vast continent, but the most important action would be confined to an area only the size of California.

Since 1972, when protecting Antarctica by making it a world park was first proposed, the Sierra Club has played a leading role in the effort to preserve this virtually untouched region. The continent serves the world well as a base for monitoring pollution levels and global weather change. In the future it could provide essential resources when they no longer exist elsewhere. If the cooperative spirit of the Antarctic Treaty is violated, it could spell disaster, not only for the Antarctic Treaty structure, but for the continent itself. And the world would lose the benefits of dedicating this last wilderness area to the good of all life on the planet. □

Patricia J. Scharlin is director of the Club's International Earthcare Center. She served on the U.S. delegation to the Antarctic Treaty Powers meetings in 1977 and is a member of the State Department Advisory Committee on Antarctica.

Yellowstone:
The Region Is Greater Than the Sum of Its Parks

PHILIP M. HOCKER

WHEN LEWIS AND CLARK rendezvoused at the mouth of the Yellowstone River in 1806, they gazed upstream with some dim awareness of the country above, having had an uncertain report of "a considerable Fall" on the upper river. And they felt pretty sure of what lay beyond, just the other side of the headwaters: Santa Fe, and the Mexican settlements.

They were wrong by a thousand miles, but they began a tradition of incomprehension of the Yellowstone region as a whole that continues in government policy to this day.

The block of continuous forestland and undeveloped prairie surrounding Yellowstone National Park comprises the richest, most nearly intact complex of wildlife and wilderness in the lower 48 states. Much has been done already to preserve these lands; they include 2.5 million acres of national parks and wildlife refuges, and almost 11 million acres of national forest, including 3 million acres in wilderness areas.

Americans' hopes and fears for the Yellowstone and its wildlife have inspired many innovations in conservation that have later been applied to other areas. But much remains to be done—and much that has been only partly protected is still vulnerable.

When the original boundaries of Yellowstone National Park were drawn in 1872, the simple rectangle they enclosed disregarded biological needs of the wildlife of the park; the goal conservationists seek in Alaska—protecting entire ecosystems intact within a single management—was beyond the limits of understanding in 1872. Ten years later, the problem was partly recognized by General Philip Sheridan, who recommended extending the park's boundaries by 40 miles to the east and 10 miles to the south, in order to create a more complete game preserve. But it wasn't done.

Then, as now, the Yellowstone's large herds of wide-ranging mammals captured America's imagination: the thousands of elk, deer, mountain sheep, antelope; the moose and the remnant buffalo herd and, last and greatest, *Ursus arctos horribilis*—the grizzly bear. Though the list of local species also includes trumpeter swans, whooping cranes, bald and golden eagles, loons, osprey and hundreds of less-visible forms of fish, flesh and fowl, the largest and best-known denizens of the Yellowstone best illustrate the threats to its future.

Habitat destruction is the danger. Hunting pressure under present controls is

Opposite: *Blacktail Pond and the Teton Range, Grand Teton National Park* *Photograph by Ed Cooper*

Philip Hocker Inset: Richard Murphy

A hiker above Granite Creek, in the Gros Ventre mountains. Inset, a herd of elk in Yellowstone National Park.

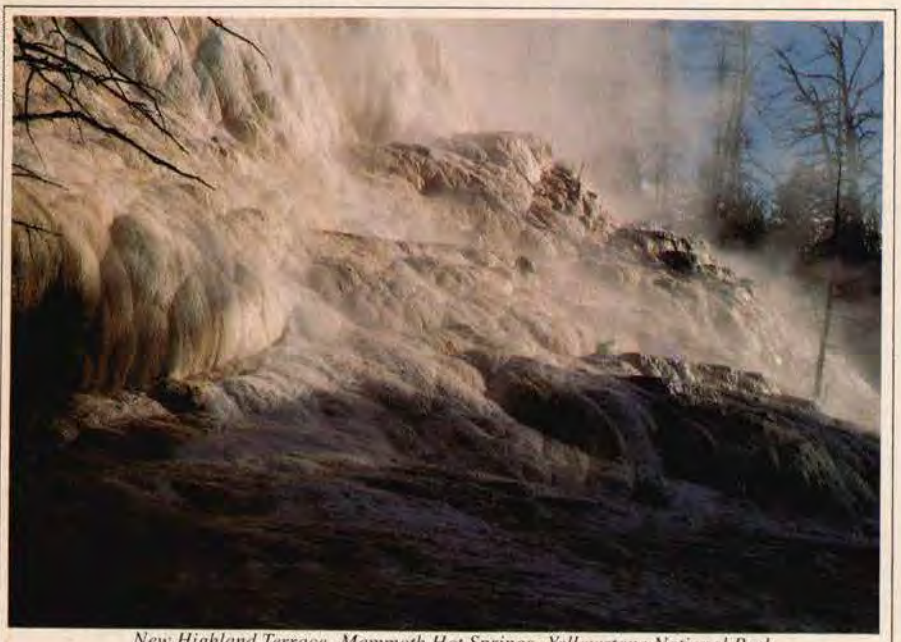
not endangering the survival of major game species. The debate over hunting is an old and difficult one, about which thoughtful people differ. But the losses owing to hunting are replaceable; the losses of habitat caused by development of the region are permanent. Protection of wildlife habitat should be the unified objective of hunter and nonhunter alike. This habitat does not stop at park boundaries; the ecosystems that support wildlife extend far beyond the borders of the two national parks in the region.

After years of campaigning for greater protection of the lands around Yellowstone by General Sheridan and later by Teddy Roosevelt, the first steps toward preservation were taken in 1891 by President Harrison, who established "Forest Reserves." These were augmented by later additions and eventually became today's national forests. Game preservation was the principal purpose for these first forest reserves in the Yellowstone region . . . a purpose remembered only fitfully by today's Forest Service standards.

By 1902 the forested hills, highland plateaus and mountains of the Yellowstone region were largely reserved from settlement, but the lowland winter range was not protected—and still is not.

Mountain meadows and woodlands where elk herds summer are covered with many feet of snow in winter; with the first heavy storm of autumn the herds begin to migrate to lowland winter range in sheltered valleys. In the past these migrations covered longer distances, but human pressure has caused evolutionary selection favoring sub-herds that migrate shorter distances from the protection of the park. Even so, several thousand elk migrate almost 100 miles each spring and fall on their annual march from central Yellowstone Park to the National Elk Refuge in Jackson Hole.

Requirements for various species differ, but many need winter range that is not available within the protected park-



David Sumner

New Highland Terrace, Mammoth Hot Springs, Yellowstone National Park

lands. Moreover, suitable winter range is most often located in lowland, riverside areas that are also favored for human settlement. These areas were omitted from the forest reserves; though relatively small, they are extremely important to the region's wildlife.

The chain of a species' life-cycle is only as strong as its weakest link; in the Yellowstone region, the critical factor is the availability of winter range.

For whitetail deer, that chain broke. Within the Yellowstone Park boundaries their winter range was limited in size and heavily used. Outside the park, along the Yellowstone River to the north, along the Snake River in Jackson Hole, and in other valleys, ranching and poaching eventually drove the deer from their winter range. By 1940 they were reduced to a few specimens. Now they are gone, extinct in the Yellowstone region.

A small herd of pronghorn antelope winters at the north end of Yellowstone Park. They do not migrate: all migratory habit has long since been disrupted. They survive on a small area of marginal winter ground inside and near the park boundaries, land not really adequate to their needs. Biologists watch and wait, helpless, knowing that one or two severe winters could wipe out this herd, and that it will not be naturally replaced.

There are more encouraging stories, too, of wildlife recovery in the region. Wolverine were decimated everywhere outside the parks by years of aggressive programs of predator poisoning; since the 1972 ban on poisoning, wolverine are recovering their range and have recently been seen in the southern end of the Bridger National Forest, 150 miles south of Yellowstone.

While the winter range problem largely involves private lands, a different, equally threatening erosion of the values of the Yellowstone region is taking place on the former forest reserves. For many years the Forest Service, which inherited these lands, followed a careful policy that served wildlife well. Partly because of the generally poor quality of timber available on the dry, high-altitude, slow-growing forests of the Reserves and the long and expensive distance to markets, road-building and timber-cutting were mostly local and had little impact.

Though the land's wildlife and wilderness were not formally protected, as late as 1935 it was possible for Olaus Murie, the noted wildlife biologist and authority on the elk, to write: "Thanks to the Forest Service, Teton National Forest has in the past been administered so as to preserve the wilderness to a great extent."

But in the mid-1950s the levels of timber harvest in the forests abruptly doubled, and doubled again within the next ten years. New sawmills were built by international corporations, changing the entire scale of logging from small selective harvests to massive clearcuts. Public outrage at the no-man's-land results forced modification of Forest Service methods, and timber harvests now consist of large numbers of artfully designed mid-sized clearcuts, rather than a few huge wastelands. But the cumulative process of converting mountain wildlands into wood farms continues.

A certain ratio of open meadowland to wooded cover is best for elk range; when timber harvests change that ratio, the useful habitat of the forest is damaged. The cumulative effect of progressive clearcutting and increased use of the back-country logging roads is the disruption of the elk's traditional use patterns. Whether the elk can adapt to the new conditions is unknown.

Some timber harvesting in selected areas is probably compatible with wildlife maintenance. The Forest Service has even characterized some recent timber sales as "enhancement of wildlife habitat," but too often the phrase has become a bitter sham; a recent sale for "enhancement" adversely affected a research study area that was being used to study the effects of logging on elk! Thus managers of the local forest—violating both common sense and the National Environmental Policy Act—claimed "enhancement" goals for a timber sale that would disrupt the very study being made to determine whether such "enhancement" in fact existed.

Similarly, on the west slope of the Teton Range, the Winegar Hole unit is slated for timber harvest to "enhance wildlife habitat." But the area is designated as essential habitat for the grizzly bear, and timber harvesting and the welfare of the bear clearly are incompatible.

Though they were established with a common purpose, the national forests of the Yellowstone region have been fragmented and lumped with other forests. They are managed in a piecemeal way, and the common treasure surrounding Yellowstone is now overseen by three Forest Service regional offices, directing eight separate national forests. All too often, the national parks are viewed suspiciously as something on the other side of forest boundaries that interferes with the usual business of managing these forests for their commercial value alone, just like any others.

When roadless lands in the Yellowstone region have been reviewed for wilderness in the land-management planning process, in most cases they have been rejected on the grounds that there was "enough" wilderness in the area. With its fragmented approach, the Forest Service is steadily nibbling away at the roadless resource, never pausing to evaluate as a whole the potential of protecting a rich, unified complex of interacting wildlife and wilderness, divided only by a few slender highway corridors. Instead, each roadless tract is viewed in isolation, and programmed for road-building, logging and oil and gas drilling with no comprehensive appreciation of the region.

The "divide and conquer" approach of the Forest Service was applied with a vengeance during the RARE II study. As badly as wilderness fared nationwide in RARE II, in the greater Yellowstone region it was treated far worse. Nationally, the Forest Service recommended only 24% of our remaining national forest roadless lands for wilderness designation; within the greater Yellowstone region barely 14% was recommended. Of almost 4.9 million acres inventoried as roadless at the beginning of the study, only 686,000 acres are now slated for wilderness.

The Gros Ventre Range was named by early fur trappers, using the French

phrase for the Big Belly Indians, who were famed for their prodigious appetites. It is a diverse land, ranging from rocky summits dotted with bighorn sheep to deep, moist canyon bottoms harboring moose, trout and eagles.

On a brisk, bright afternoon in July, sun and scudding clouds overhead find us hiking up Sportsman's Ridge in the area, alone, quietly walking through the wind of the ridgetop. There is no blazed trail, but the land is laced with deeply indented pathways beaten by generations of elk.

A dab of brown movement catches your eye. Another. Elk, quietly browsing their summer range, pass through the meadow a few dozen yards away.

It is a small band, you think, perhaps a dozen or two. That would be a fine sight, a dozen elk, each 600-odd pounds of muscle, trim and brown in new summer coats, velveted antlers on the bulls. Successively, by twos and threes, more and more brown forms pace into view. One dozen . . . two . . . four . . . A sudden movement startles them; they begin to drift away along the ridgetop. It is a graceful, almost silent rippling motion, punctuated by the clicking of their hooves on the stony ground. More and more of the herd emerges from behind the trees, pausing at the ridgetop before running down the far slope to the lush green meadows below.

In the windy sunshine you stand spellbound: more than 200 elk together, an unusual gathering, gliding like some large brown animated carpet across the meadows, dividing into separate streams around each tree or obstacle and reuniting on the far side, until the momentum of their fear is dispelled and they slow to a scattered halt. The calves bleat as they search for their mothers in the herd, then calm is gradually restored and, breaking into twos and threes once more, they resume the persistent business of eating.

This, then, is the Gros Ventre. Large even by the standards of the Yellowstone region, the Gros Ventre Range and its outliers cover more than half a million acres of roadless land. The Sierra Club and other conservationists have endorsed 388,000 acres for wilderness here.

Gros Ventre is the largest RARE II area in the lower 48; and even the Forest Service could not deny the great potential as wilderness. Its 289,000-acre wilderness recommendation omits, though, practically all the lowland big-game country on the southern flanks of the range—an area equal to four entire average RARE II wilderness recommendations. The Forest Service, despite opposition from neighboring communities to the south, has scheduled six timber sales (totaling 28.6 million board feet) in the disputed area in the next five years; the timber sale will permanently reduce the potential wilderness to the boundaries proposed by the Forest Service.

Prompt Congressional action is essential if the full potential of the Gros Ventre Wilderness is to be preserved. Located anywhere, it would be a magnificent addition to our National Wilderness Preservation System; placed in a keystone position in the greater Yellowstone region, it takes on critical importance for preserving the wildlife continuity of the lands around the Parks.

If the Gros Ventre typifies the grand scale of opportunity in the Yellowstone region, the DuNoir basin area is its concentrated essence.

Though it is smaller—about 40,000 acres (this may be not so small by most standards)—the DuNoir is a gem of forest, lakes and crags, serving as elk calving grounds, summer range and bighorn sheep range. It is the last drainage of the upper Wind River valley, on the southeast side of the greater Yellowstone region, that has not been clearcut by the Forest Service to provide timber for the Louisiana-Pacific lumber mill in nearby Dubois, Wyoming. The basin's French name derives from the heavy stands of black timber covering its lowlands (and attracting the sawmill managers). Yet, as a former Wyoming Congressman stated: ". . . the timber values of the DuNoir are insignificant in relation to its other attributes." The Forest Service's discredited "purity" argument was used by local Forest Service personnel to attempt to disqualify much of the DuNoir—the part with trees on it, that is—from consideration as wilderness. A few rotting stumps and decayed remnants of small-scale, selective logging in the early years of the century, barely visible to an observer today, were considered more significant than the abundant game and outstanding beauty of the basin.

More than 28,800 acres of the DuNoir are protected now as a "special management area" whose wilderness character must be maintained. This unique status is the result of the inability of Congressmen of Wyoming to agree over the DuNoir's fate when the adjacent Washakie Wilderness was legislated in 1972. "Special management" was supposed to end in 1978, and Congressman Teno Roncalio, a stalwart supporter of wilderness, introduced a bill to designate an enlarged, 34,500-acre DuNoir as wilderness. It was strongly supported at the local hearing, but the pressure of industry was more strongly felt in the Senate. The legislation failed; the special-management-area status remains in force.

For the present, no intrusion will be made on the heart of the DuNoir basin. But as the cutting of nearby forests continues beyond realistic sustained-yield levels, pressure to log the DuNoir will mount once more.

Gros Ventre and DuNoir exemplify the summer range and public lands problems threatening the integrity of greater Yellowstone. On private lands and on Forest Service lands dedicated to private business interests through "special-use" permits, commercial and resort development is creating a different kind of pressure on the wildlife in several areas of the region.

Increasing areas of lowland riparian habitat in the northwest area of the region are being taken over by secondary development "spinning off" from the Big Sky resort in the Gallatin Valley and from a proposed Ski Yellowstone resort at Hebgen Lake. The Ski Yellowstone development, in particular, will have a serious impact on the local grizzly bear population, which ranges in and out of Yellowstone Park regularly.

The preservation of natural beauty is a spiritual act, a statement of humility and belief that we are made better people (or, at least, stayed from becoming worse) by saving and studying the constructions of forces beyond our own power, and still largely beyond our understanding. And often those opposed to preservation are essentially not in economic need (for if these lands held great riches they would, generally, not still be wild), but dedicated to a contrasting belief: that the things of the earth are here solely for human use, and that failure to consume the products of the earth constitutes not a sin of omission, but positive sin.

Between these opposing views, the Forest Service, unwilling to make a positive decision, seeks compromise. The area's protection, ironically, poses the greatest danger to the greater Yellowstone region. So much of the land is mandated to be preserved that the reflex of the Forest Service is to dedicate the rest to development, as we have seen in RARE II. That reflex must be overcome through national pressure. □

Philip M. Hocker chairs the Wyoming Chapter of the Sierra Club.

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Jackson Hole:
Are We Loving It to Death?

JEAN HOCKER

ONE COULD DESCRIBE Jackson Hole simply as a mountain valley in northwestern Wyoming just south of Yellowstone Park. But to appreciate Jackson Hole, one must begin with the Tetons, surely among the most magnificient mountains in North America. Only 10 million years old and still rising, this fault-block range soars without warning, without foothills, 7000 feet straight up from the valley floor. There its massive presence, sculptured by eons of water and ice, guards the western flank of Jackson Hole and dominates it utterly. On the valley's south and east are older, gentler mountains; to the north, the Yellowstone Plateau completes the encirclement of Jackson Hole. And through the valley's flat, sagebrush floor wind the clear swift waters of the Snake River.

It is not surprising that Jackson Hole has been the object of national attention almost since its first permanent settlers arrived. In 1898 Charles D. Walcott, director of the U.S. Geological Survey, suggested that the young Yellowstone Park be expanded to include the Tetons and Jackson Hole. Walcott was particularly concerned about the inconsistency of protecting the summer range of the Yellowstone elk herd while ignoring its winter migration south into the Jackson Hole area.

His suggestion was to be heard over and over in following years. In 1913 Congress authorized purchase of land in Jackson Hole that became the core of the National Elk Refuge, but no action was taken to protect the mountains or the valley.

Meanwhile, during the early years of the Twentieth Century, settlers continued to come to Jackson Hole to establish homesteads and to ranch. They were pioneers—of necessity, they were rugged and self-sufficient people.

Even in those days, commercialism had begun to creep into Jackson Hole; this, coupled with such atrocities as the damming of Jackson Lake and proposals to dam the exquisite Jenny and Leigh Lakes, made the National Park Service determined to seek protection for the Tetons. Even some astute valley residents, apparently foreseeing the future, proposed the creation of a "national recreational area" in Jackson Hole.

But it was John D. Rockefeller, Jr., who provided a way. Following a visit to Yellowstone and Jackson Hole in 1926, Rockefeller was so impressed that he proposed buying the entire valley and turning it over to the federal government for a national park.

In 1929 a small Grand Teton National Park was finally created, by transferring only the mountains themselves and the lakes at their base from the Forest Service to the National Park Service. Almost none of the valley itself was protected, however. It was this land that Rockefeller was purchasing. Although he had reduced the scope of his proposal by excluding the southern portion of the valley, in 1930 he announced his intention to donate land for an expanded park.

The people of Jackson Hole, fearing loss of tax base and domination by the federal government, did not want an expanded park, however. Their vehement opposition successfully blocked park expansion for years, until finally, in 1943, President Roosevelt circumvented Congress by decreeing a Jackson Hole National Monument and accepting Rockefeller's donation.

Enraged, the people of Jackson Hole continued to fight for a few more years. But finally, in 1950, Congress created the present Grand Teton National Park, incorporating the lands of the Jackson Hole Monument. Fifty-two years after Charles Walcott first proposed protection of the valley, the job was complete. Or was it?

The part of Jackson Hole Mr. Rockefeller did not purchase did not seem to matter much in 1950. The entire population of Teton County was only 2593, nearly two thirds of it concentrated in the small town of Jackson. Aside from the town and a few tiny settlements, land was used almost entirely for agriculture. The ranches were a fitting complement to the new national park; Jackson called itself "the last of the old West," and tourists readily accepted their claim.

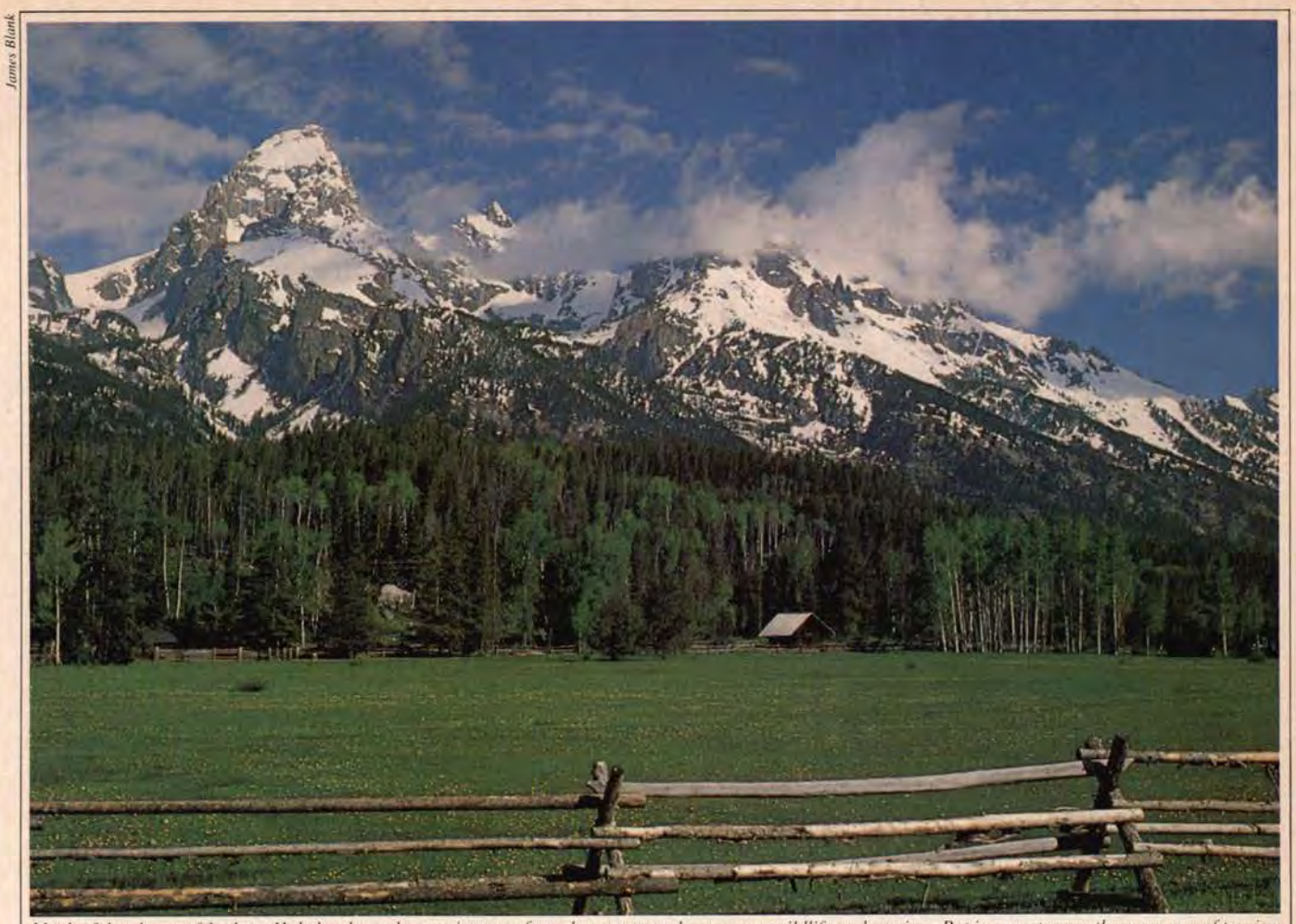
Perhaps it was inevitable that big-time skiing would come to Jackson Hole. Jackson was already full of skiing enthusiasts; it certainly had the required snow; the setting was spectacular; and the ski boom was on all across the country. The people of the valley understandably did not mind the idea of making money in the winter as well as the summer.

In 1965, when Teton Village, the Jackson Hole Ski Area, was opened, few realized the enormous impact it would have on Jackson Hole. Suddenly it was possible for residents to stay in the valley and make a living all year. No longer did one have to be hardy, independent and a little eccentric to spend the entire year.

The skiers were different from the summer tourists. They did not pass through in Winnebagos. They stayed longer, spent more, rented condominiums and, if reasonably well-heeled, might even build second homes.

The ski area grew slowly at first; Jackson Hole had a reputation for being cold and hard to get to. But an aggressive marketing program changed that. In 1973/74, the area recorded 84,736 skier days; two years later, 126,195; in 1977/78, 176,851. Jackson Hole's renown as a ski resort was perhaps sealed when a

James Blank



Much of the charm of Jackson Hole has been the coexistence of ranches, spectacular scenery, wildlife and tourism. But in recent years the pressures of tourism and development have increased dramatically. Something must be done if the valley is to retain its uncrowded, rustic character.

young visitor was recently heard to remark: "But doesn't Jackson pretty much close down in the summer?"

She has obviously never been to the valley in August! Grand Teton Park now draws more visitors than Yellowstone, and most of them come in the summer. Last year more than 4 million people visited the park—the equivalent of 1 in 50 Americans. Some of them, too, will decide to return, to build second homes or to give up their crowded cities and move to the mountains to stay.

The nation loves Jackson Hole. And it is in danger of smothering the very object of its affection.

Mr. Rockefeller's first inclination, to buy the entire valley, was probably correct. Surely, if they were to start over, the far-sighted men who fought so hard to protect Jackson Hole would not want to see the park share the valley with a city of 40,000 people. Yet that is not as unlikely now as it might seem.

Today, by most estimates, Teton County's population is about 10,000; more sobering is the rate of its growth. Indicators such as employment statistics, telephone and power hookups and new building permits point to an annual increase of about 12%, a growth rate rivaling that of any energy boomtown. At that rate, the population will double in about six years. The unimaginable city of 40,000 people could be reached in less than thirteen years.

But even now the impacts of growth are becoming unacceptable to many people, residents and visitors alike. In the town of Jackson, "the last of the old West" will, by the end of 1979, boast a new Motel 6, a huge Safeway store, a Wendy's Hamburger stand and a Pizza Hut—and that is only what's happening this year.

Outside town, ranching somehow still survives as a way of life. Cattle and haystacks and open spaces still dominate the landscape in many parts of lower Jackson Hole. But the scenery is changing rapidly. Land is being subdivided almost as quickly as the county planning commission can review the applications.

In the county, 1360 acres were subdivided last year; 433 building permits were issued in 1978. It is not surprising that the most attractive areas for development are those with the least-obstructed views of the Tetons and, especially in winter, the easiest access to highways. And that is usually land closest to the park, most easily seen by park visitors.

The greatest impact of development in the valley, however, may well be on its wildlife. Much of the private land in Jackson Hole is as critical to the wildlife as are the surrounding parklands and forestlands. In the southern part of the valley, winters are somewhat milder, the snows less deep than in the high country. These are the qualities that animals require and seek in their wintering areas. They have historically depended on these lands; many still do, and subdivision is their competition.

It is not a new story in Jackson Hole. Early development reduced the historic winter range of the elk, which are now largely confined to the National Elk Refuge in winter, where they must be supplementally fed.

But 90% of the mule deer that summer in Grand Teton Park winter south of the

park on East and West Gros Ventre buttes. It is their only winter habitat. Development of the buttes has already begun.

Moose browse on willows along the Snake and Gros Ventre rivers, on both public and private land. About 20 bald eagles spend their winters on private land. Cutthroat trout swim from waters within the park to spawn in rivers and streams on private lands. And, although the traditional migration routes of the elk have been severely altered, many still cross private lands on their journey to and from the refuge.

The people of Jackson Hole are not insensitive to what is happening in their valley; they have been struggling with the changes throughout most of this decade. At times, the struggle has been reminiscent of the bitter battles over expansion of Grand Teton Park.

Nor has the Park Service itself been able to ignore the changes so near Grand Teton's borders. In 1975 the federal agency began once more to study the possibility of expanding park boundaries. The resulting report states: "The lands in Jackson Hole are of mutual concern to both public agencies and private interests, because of their scenic and pastoral qualities. . . . " It warns, "If indiscriminate development is allowed to replace these traditional land uses, the rural character of Teton County will be impaired, and the region's pastoral setting will be degraded." Except for minor adjustments, the report did not recommend expanding park boundaries, however. Instead, it proposed establishing a Jackson Hole Scenic Area; land would remain largely in private ownership, and acquisition of lands or easements would be used as necessary to protect important scenic and wildlife resources.

Meanwhile Teton County was developing its own comprehensive land-use plan. "Telling a man what to do with his own land" was not a universally popular idea, but the majority of Teton County residents realized that a land-use plan was long overdue. A local editor called it "a bitter pill" but fully endorsed taking the medicine.

The plan, adopted in December 1977, restricts the density of developments, sets performance-standards for builders and establishes administrative procedures. But it has no authority to restrict development for reasons beyond protection of public health, safety and welfare. It controls development on steep hillsides, flood plains and land with a high water table; but it cannot require that land be kept open or in agriculture; it cannot demand that wildlife habitat remain undeveloped. Land in the area is worth perhaps $500 an acre for agriculture (although there have been no sales for that purpose for many years) and $5000 or more an acre for large tract development. Demanding that land stay in agricultural use could raise serious legal problems unless landowners can be compensated for possible economic losses.

The county commissioners recognized the plan's limitations even while they were developing it. They went a step further, asking a group of local residents to write legislation that would ask the federal government for help in preserving the rest of the valley and thus safeguarding the existing federal investment in Jackson Hole.

These citizens drafted legislation to create a Jackson Hole Scenic Area. The county proposal relied on scenic or conservation easements and on purchase of development rights from ranchers to keep land in open space and out of inappropriately dense development (which might mean no development at all, or perhaps very low densities, depending on the type of land and its natural use).

The legislation was introduced in the 95th Congress, in September 1977; joint Senate–House hearings were held in Jackson the following June, and a bill authorizing further study and funds for emergency acquisition passed the House in July.

In the end, the Senate failed to pass the study bill, largely in deference to Wyoming Senator Clifford Hansen, who has large land holdings in Teton County. Although the Senator (now retired) remained steadfastly neutral and silent, his colleagues preferred not to put him in a potentially embarrassing position.

But the threats to the Jackson Hole valley are greater than ever. If there had been federal legislation a year ago, those 1360 acres need not have been subdivided last year. Land on West Gros Ventre butte that has been proposed for subdivision could instead remain open for the mule deer who now winter in the area. A family whose ranchland is now in estate because of a recent death would not have to consider subdividing to raise money to pay inheritance taxes (if an easement were on the land, it would be assessed at its value as agricultural land rather than at its potential development value).

The urgency was further increased by last November's local elections, which changed the balance on the three-member County Commission. A long-time advocate of local planning and federal scenic-area legislation chose not to run for another term; he was replaced by a pro-growth, pro-development owner of a lumber business who has expressed strong reservations about a Jackson Hole Scenic Area.

There are about 75,000 acres of privately owned land in all of Teton County, and about 50,000 acres in Jackson Hole. Not a large portion of the region, but it is mostly flat, open land—ideal for development. Fifty thousand acres can accommodate a great many houses, a great many people.

The answer probably does not lie in expanding the park. Part of the attraction of Jackson Hole is its balance: small communities, ranches and services for vast numbers of visitors have been able to coexist peacefully with the federal lands—even to complement them—until recently. That balance can still be maintained by simply purchasing development rights to lands it is in the public interest to preserve. □

Jean Hocker, a resident of Jackson Hole, coordinates the National Committee for Jackson Hole in cooperation with the Izaak Walton League of America.

The Sierra Club's Position

The Sierra Club Board of Directors passed the following resolution in February 1979:

"The Sierra Club strongly supports prompt establishment and funding of a federal Jackson Hole Scenic Area to protect and preserve important wildlife habitat and scenic vistas, primarily through acquisition of scenic easements combined with other management tools as appropriate."

Efforts to protect Jackson Hole are coordinated by the National Committee for Jackson Hole and the Jackson Hole Project, both in cooperation with the Izaak Walton League of America. Readers who want more information and who want to help are urged to contact:

Jean Hocker, Coordinator
National Committee for Jackson Hole
Box 2443
Jackson, Wyoming 83001

A Conversation with Pioneer Conservationist and Author, Mardie Murie

FRANCES GENDLIN

The Reasons for Things

Fran Gendlin: *Every time I come to a place as wonderfully beautiful as it is here in the Tetons, in your log home, I wonder why I live in a city. Tell me, do you have to have peace in your soul already to live out here, or does being here make you happy?*

Mardie Murie: I think it's both. I don't know whether the place itself will do a great deal if you haven't come to terms in yourself with who you are, before you get here. There are people who come here and don't realize where they are. Not just the newcomers. I know that the oldtimers here had to struggle to survive. One of the chapters in *Wapiti Wilderness* tells about my conversation with a woman who had been here in the old days, and she said, "They talk about the good old days, but they weren't always the good old days." They had to get up on cold winter mornings, light the stove, go out to the barn and milk the cows, do all the washing, make the butter and much more. Well, they didn't have much time to look at the Tetons. But in that chapter I was contrasting those women with young Park Service wives today, for instance, living in modern houses with all the modern conveniences. I'm not sure they look at the mountains either.

Fran: *Do you have to look at them consciously? Isn't it often enough to know that they are here around you and that they're a part of you?*

Mardie: If you keep on looking at them, you'll see they never look the same twice. I'm puzzled by some of the people who live here. I have a feeling they don't appreciate it.

Fran: *Don't they have to appreciate it just to be here? It doesn't seem easy to live here.*

Mardie: Nowadays it's easy to live here because there's money to be made from tourists and development. More and more people are moving here to retire.

Phyllis Sievie—The Wilderness Society

Above: *Mardie Murie and her late husband, Olaus, the well-known naturalist, artist and director of The Wilderness Society.*

Below: *Rupert Cutler, Assistant Secretary of Agriculture, and William Whalen, Director of the National Park Service, with Mardie Murie after she was made an honorary park ranger.*

Sam Silverman—The Wilderness Society

David Sumner

In the distance, the Three Tetons seen from Pierre's Hole, near Driggs, Idaho, looking east across a late summer wheatfield.

It's amazing how many people stay here the year 'round.

Fran: *You live here most of the year, don't you, even in the winter, with the snow piled high around your house?*
Mardie: Yes, but I don't drive on the icy highways in the winter. I have young friends who do all my errands. And the Park Service keeps my road plowed; I'm very grateful for that.

Fran: *Yes, I see from the plaque on your wall that the Park Service has made you an honorary park ranger. That's something special. Mardie, I do a lot of interviews for* Sierra *because I think it's important for our readers to know that it's people—special people—who are saving the wilderness for the future, and that it's not just some abstract or impersonal concept—*
Mardie: Yes, and the wilderness isn't going to be there forever without some people who care for it.

Fran: *Yet I found that the questions I wanted to ask you were difficult to formulate. Because I think that what you do for conservation, like what your husband Olaus did, is more of an inspiration that motivates people today, people who can look to both of you as models for a kind of life. That's different from most of the people I talk with. When I talked with Governor Jerry Brown, I could ask him, "What are you going to do about LNG siting?" A substantive question. But when I see you, surrounded by this natural beauty, and the beauty of your own life, I want to ask you, "How have you lived your life?" "What can you tell us?"*

Mardie: When I know someone is coming to interview me, I think, "Goodness, what have I ever done? What have I done?" I have a cupboard full of all kinds of awards, yet I can't single out any particular thing that I've done, except make a lot of cookies and tea and write letters to my congressmen, and maybe harass them by telephone. All those years, when Olaus was director of The Wilderness Society, I was the secretary and he made the speeches. After he was gone I found myself making the speeches! Last summer when I was preparing for a women writers' conference in Anchorage, I was really horrified at the number of talks I would be making. I thought, "Mercy, I must have just said the same thing over and over."

Fran: *I find that's all right when I do it—as long as I say the same thing to new people!*
Mardie: You spoke about our lives as an example. There was a great deal of good fortune—our whole career with The Wilderness Society and the fact that we were allowed to live in a wonderful place like this. And all those expeditions—it gave us an opportunity to live the way we really wanted to live.

Fran: *Before I came here I read as many of your books as I could:* Two in the Far North, Wapiti Wilderness, Island Between *and your husband's* Journey to the Far North.
Mardie: You really came prepared!

Fran: *I wanted to see if I could discern something from the books, so that I could come and really get to know you. And what I finally came away with was that your husband was not only a naturalist, a scientist, but also a romantic, an adven-*

turer: Isn't that what it was all about? Curiosity? The love of adventure with nature?

Mardie: Oh yes, I think he was that in large part, yet he also had a very dedicated and keen curiosity about his field, biology, about everything that ever walked or crawled or lived. That was his motivating force—to find out more. He used to say that there is no limit to man's capacity to learn things—if man didn't destroy himself first by destroying his earth. I remember him saying many times that he believed in evolution, that man was not the ultimate species and that we had better behave properly . . . It was this kind of thing that motivated him, plus his actual pleasure at being out of doors.

Fran: *There seemed to be such joy in everything he did.*

Mardie: Yes, there was.

Fran: *What's happened to the joy that you both seemed to feel? How is that joy manifest now, when we spend our time lobbying for legislation, when so much of life seems to be becoming institutionalized, routinized, mechanized?*

Mardie: I still find that joy in some of the young people who are able to deal with nature and animals on an individual basis, getting involved in some phase of nature where they can see life going on. I remember Olaus used to say he didn't think people should go into biology unless they were innately interested in it and couldn't stop themselves, because there is a lot of hardship and hard work. Olaus never recognized hardship though. I don't think he would have ever felt, "Well, this is a hardship." It was just what he was doing in order to find out what he wanted to find out about those animals. And that was one of the adjustments I had to make on our honeymoon—the work came first. I was just along on an official trip, and I had better not be in the way.

Fran: *That was in Alaska, where you grew up. You got there in 1911?*

Mardie: I was there earlier, when I was only two, but I don't remember much of that. But then my parents moved there, and I grew up in Fairbanks.

Fran: *Yes, you describe your childhood so well in* Two in the Far North.

Mardie: Later on, when I was fifteen, I went Outside for a while but came back, went to the University of Alaska and married Olaus.

Fran: *You were the first woman graduate of the University of Alaska.*

Mardie: Yes, I got a bachelor's degree in business administration. I was an engineering major, but business administration was the only degree I could get in Alaska.

Fran: *How many students were there?*

Mardie: All told, maybe 45. I *was* the senior class. There were six juniors and maybe fifteen or twenty sophomores. It is a special thing to be part of the beginnings of something. Everybody was so eager and wanting to do things and had such hope for the university. Last year I went back there, and they gave me an honorary degree.

Fran: *It must have been very exciting, starting out on the frontier, in the exploration of life itself.*

Mardie: Yes, that's what it was, I guess. Alaska was still such a frontier when Olaus and I started out that we never thought of the future of the country. Nothing seemed to be challenging or threatening Alaska at that time. People just led their lives with whatever resources they had; the challenge was in surviving. When I was growing up, people were disgruntled because the government wasn't building the railroad fast enough or working to open up the coal mines. Now I think they've reached a point where they want the federal government to go home and let them do what they want to do. I often talk about government being cumbersome; but at least it's there, and sometimes it preserves things for us.

Fran: *I sometimes think laws have to be about 25 years behind current opinion. Because if laws changed every day to what people think at the moment, there'd be no continuity and no stability.*

Mardie: No, and what people are thinking may not be what is good for the future. I give thanks every day for the government agencies that keep working up there for the preservation of areas in Alaska.

Fran: *Have you been active in the Alaska Coalition?*

Mardie: Yes, I have.

Fran: *Through The Wilderness Society?*

Mardie: Yes, and I was also asked to go up there in 1975 with the Park Service, and it was one of the great experiences of my life.

Fran: *In what way?*

Mardie: They wanted me to visit some of the proposed new parks that I hadn't known in my previous years in Alaska. So, I flew hither and yon through all those marvelous areas, and if I thought I knew Alaska pretty well before, well, the places I saw that summer opened my eyes. So I feel very emotional about Alaska. I testified at hearings and I've done everything I could to further the preservation of Alaska.

Fran: *How has Alaska changed since 1911?*

Mardie: The towns have grown larger and airfields have arrived. Military installations have been built. But all that's around the triangle formed by Fairbanks, Anchorage and Juneau. The rest of the country is still as it was, except for that zipper called the pipeline, across the middle of it.

Fran: *Is Alaska still our frontier?*

Mardie: Oh yes, if we have a frontier, it must be Alaska. The impressive thing is that so much of it is still untouched. I hope the native peoples who have been living there, not touching it very much, will be allowed to stay on. They have to learn how to use modern inventions, but I think most of them basically want to continue in their villages, doing the kinds of things they've done for centuries. After all, they were there for quite a while before the white man came, and they hadn't done much damage to their country. When I was in Alaska in 1975 I was fortunate to fly to some of the native villages and to an Eskimo sealing camp. It was quite a good experience for me.

Fran: *You had gone with your husband as a new bride. What mode of transportation did you use then?*

Mardie: Dog team, motor boat and then poling boat. And then on our own feet.

Fran: *Did you ever suspect when you were young what path your life would take?*

Mardie: No, I had no idea. I just like to be outdoors. I'd go out by myself and wander around, so much so that my stepfather sometimes claimed I was part gypsy. But I didn't know much about wildlife then. I thought I would like to run a boarding house for working girls. I had a bit of social worker in me, I guess. But at that time I was shy and self-conscious and rather uncomfortable with people; but I was still interested, and I was hoping to work with people.

Fran: *I gather that you really ran a boarding house for everyone, for naturalists, for visitors, for animals, for birds. . . .*

Mardie: I remember my son saying one summer, "Mommy, you ought to run a youth hostel," and I said, "Just what do

you think I'm doing?'' Yes, that was my girlhood dream, all those people coming in and out.

Fran: *Well, you've done it.*
Mardie: Yes, that's the way it turned out.

Fran: *I guess with luck, you can really get what you want.*
Mardie: I really think so. If people want something badly enough, they'll find a way, even though it might seem something of an accident. I don't know whether I believe in accidents, though; it's a combination of everything within the person, your whole attitude toward the universe that makes things happen to you. Curiosity, too—if you're curious enough about life and what's in it, then you're always striving to learn more. And I've always said that curiosity can keep you going when everything else fails. And of course, that's what drove Olaus and other naturalists. A strong desire to know more about this animal or that bird.

Fran: *Yes, Olaus was a devoted scientist, a biologist who classified species. Yet it was the stories he told and also the way he told them, and the drawings he did that interested me more than scientific classifications.*
Mardie: That's because he was interested in those animals, not only as creatures to study, but as beautiful parts of the natural world he loved. His artistic ability too—to be able to draw and paint those animals—gave him a great deal of pleasure and some of that pleasure he was able to transmit to others. His feeling was sensed by everyone who met him. A young writer once asked me, ''What would you say was the most important thing about your husband, if you were writing about him?'' I said, ''His influence on young people.'' Without even trying, I could think of 30 young people whose lives he really affected. And I don't know a greater thing someone can do in the world. Maybe none of us realize what great effect we do have on our fellow human beings. You can't know. It's like tossing a pebble into a pond. Maybe that is more important than holding high office or accumulating wealth.

Fran: *Tell me, do you know of such people now? Those with that insatiable curiosity, that dedication? People we can model ourselves after? The romantics? Perhaps romantic is the wrong word.*
Mardie: No, I know what you mean.

Fran: *The Olaus Muries, the John Muirs, the Bob Marshalls, the Dave Browers?*

Mardie: Yes, and Sig Olson and Ernest Oberhalzer are also good examples. They had a great sensitivity to the environment. These things all come together, I suppose, and make up a person.

Fran: *I guess I'm asking my earlier question again, differently. People seem so jaded now. How do we motivate people to want something so intensely that they can't stop themselves from becoming, like your husband said, a biologist or a ranger or a naturalist?*
Mardie: It's true that we are surrounded by mechanical things, with radios and televisions blaring at us, and neon signs glaring at us. All that has an impact on a person's spirit. That's part of the reason I am such a real fanatic about preserving what wilderness we have. I don't see any other source for keeping joy and sensitivity and happiness in people's lives.

Fran: *In your preface to Olaus' book,* Journeys to the Far North, *you say that the book portrays an era of adventure and an art that is now gone, not to be recaptured. How can people today get that wonderful feeling of adventure and excitement and exploring the unknown that you and Olaus had?*
Mardie: It can happen any time they go into the wilderness and leave all the mechanized equipment behind for a long enough period just to be, quietly, in the environment, really to experience it. I know that affects them. But it's very hard to think about these things without a feeling of fear of too much, of too many people.

Fran: *So many people live vicariously, through television, through books that tell about things; and so many of them feel, I think, that it's just too much trouble to go out there, away from their comfort.*
Mardie: Yes, that's probably true. But I think if they have any urge to have the other, undiluted experience, then they will find some way to do it. Abraham Lincoln said that in the last analysis, most people get what they really want. People say to me ''Oh, I would love to see Alaska someday. I would love to go to Alaska.'' I have often been tempted to say, ''Well, why don't you go?'' Because if they really want to do it, they'll find some way. I think of the young people I know who go to hike in the Brooks Range—none of them are wealthy. They save enough money from their jobs to pay for a chartered flight to get them up there, and then they're on their own. All those I know who have gone up there have come back with a new stature. When my son Martin was a professor at Antioch College he arranged an Arctic expedition for twelve of his students. They all stopped here on the way up and then they came on their way back, too, but they didn't all come back; four stayed in Alaska. A couple more have gone up since. That's how it affected them.

Fran: *When you say these experiences affect you, I know that some people have had mystical experiences in the wilderness that changed their lives. Have you ever heard anyone talk about that?*
Mardie: Indian life was full of them. I just finished reading *Hanta Yo*, a book about the Sioux Indians. Hanta yo means ''clear the way.'' It is full of mystical experiences. Certain members of the tribe are actually expected to have what we would call psychic experiences. It was part of their life. I think the Eskimos had some of that also. The word ''inspiration'' is so overworked, but we mean something like that by it. I think people do have such experiences in the wilderness, when they are peaceful and have time to think. I believe I have. I remember a couple of places in Alaska that are so very, very quiet. Somehow the quietness sank right into me. That wouldn't be called a mystical experience, but it was something that affected me very deeply.

Fran: *Transforming?*
Mardie: I think it gave me strength.

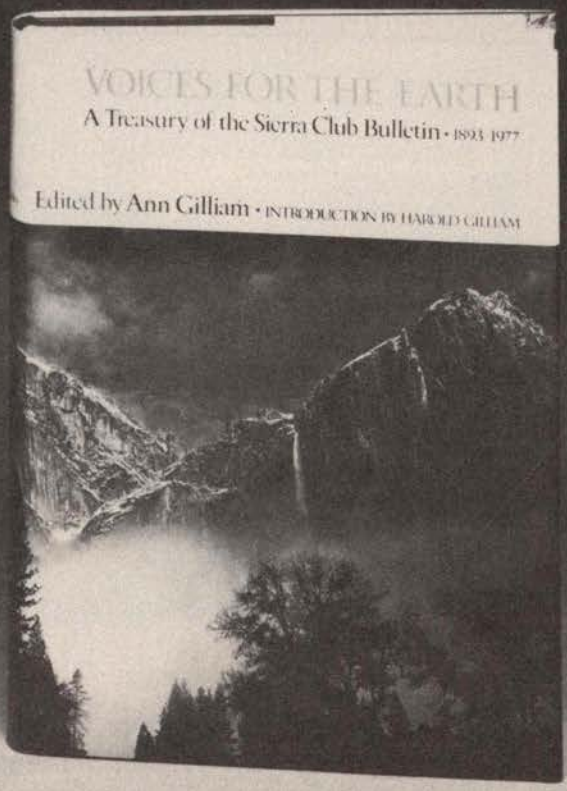
Fran: *In the new epilogue to* Two in the Far North *you wrote about several different reasons for preserving Alaska; one of them was what wild places do for man's spirit.*
Mardie: Yes, that's just what I mean. It's difficult to find a place that you can feel humans have hardly touched—a place where there is no sign of man. In those few places though, people take on a kind of humility. I think you open yourself to whatever that place in the wilderness can give you.

Fran: *I feel the same way in the West. An easterner, I've been living in the West only four years. I find that what the West with its vast open spaces does for me is to expand me, and I don't know how to explain this to my eastern relatives.*
Mardie: My stepfather used to analyze words for me, and I remember his telling me that the word ''sympathize'' means ''similar feeling.'' And you can't really sympathize with someone unless you've had a similar feeling yourself.

Fran: *So is there a way to communicate with people, to their spirit, when they haven't had a similar feeling?*

Continued on page 33

Who Will Speak Out for the Wild, Silent Places?



VOICES FOR THE EARTH: A Treasury of the Sierra Club Bulletin
edited by Ann Gilliam
introduction by Harold Gilliam

Since its first issue in 1893, the Sierra Club Bulletin has published some of the finest writers ever to breathe mountain air. Now Ann Gilliam, a club activist for twenty-five years, has gathered the best of Bulletin writing in *Voices for the Earth*.

This treasury contains the full sweep of club history, from John Muir's description of the Great Tuolumne Canyon in Yosemite (1873) to the Club's effort in 1977 to establish a Tall Grass Prairie National Park. Also included are Will Colby, Wallace Stegner, William O. Douglas, Jacques Cousteau, David Brower, and many more. Here are the first ascents, from early explorations of the High Sierra to the West Ridge of Everest; accounts of conservation battles from the Grand Canyon and Long Island Sound to Alaska; and an overview of the growth of conservation philosophy to encompass the issues of pollution, nuclear power and population. The book is replete with the photographs of Ansel Adams, Philip Hyde, Cedric Wright, and others that have distinguished Sierra Club publications.

Voices for the Earth distills the history of the Sierra Club and the evolution of the conservation movement from the early mood of wonder and discovery to the current struggle for the protection of America's threatened natural resources. 592 pages, 75 halftones, bibliography, index, 7x10.

Cloth — Retail price: $19.95
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CRICKET in the GRASS

by Philip Van Soelen

Cricket in the Grass is an almost totally visual book about natural life in a small watershed. The drawings vividly illustrate the principles of the ecosystem and tell some exciting stories, too. There's the cricket, for example, and the toad who eats him, and then the snake, who eats the toad, and the hawk.... Here are the food chains and life cycles that inform the young reader (and the pre-reader, too) about the natural world. Ages 6-12. 128 pages, 8x8. Black-and-white illustrations.

Cloth — Retail price: $8.95
Member price: $7.15

Sierra Club Guide to

THE WILD INSIDE

by Linda Allison

The Wild Inside explores the natural history of "the great indoors," and finds nature as fascinating at home as it is out in the country. There are a lot of small, undomesticated creatures living in the cleanest of houses, and this book shows you how to discover them: the spiders, the mice, the animals that grow on plants and the plants that grow on food. This book is filled with indoor projects that will help youngsters discover gravity and centrifugal force, observe changes of weather in a small space, and understand the rotation of the earth as evidenced in a draining tub. Ages 8 up. 144 pages, 8x8¼. Black-and-white illustrations.

Cloth — Retail price: $9.95 Member price: $7.95
Paper — Retail price: $5.95 Member price: $4.75

THE PUMPKIN PEOPLE

by David and Maggie Cavagnaro

The Pumpkin People is an adventure story about parents and children who witness the cycle of birth, growth, death and rebirth in their backyard pumpkin patch. First they plant the seeds and watch the growth of the vines and fat ripe fruit. Then they make the jack-o-lanterns (the Pumpkin People!) and — in strikingly beautiful photographs — they launch the Pumpkin People on a nearby lagoon. When the fruit begins to wither, the children notice the appearance of new shoots. This story is a good way to introduce children to the cycle of all life. Ages 6-9. 32 pages, 8x7. 18 color photographs.

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THE LOST KINGDOM OF KARNICA

by Richard Kennedy
illustrations by Uri Shulevitz

When the King of Karnica, dreaming of untold wealth, decides to dig up the enormous, glowing red stone found in the countryside, the Wise Man warns him that this miraculous stone might be the heart of his kingdom. But will the King listen?

The playfulness and brilliance of Uri Shulevitz's drawings is matched by the adventure and imagination of Richard Kennedy's story. Ages 6-9. 32 pages, 8x10. 18 full-color illustrations.

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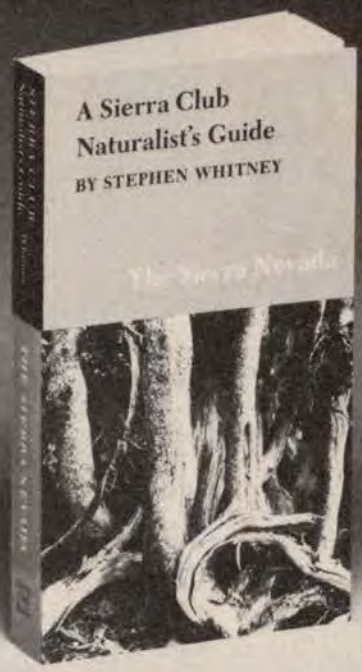

STARTING SMALL IN THE WILDERNESS: The Sierra Club Outdoors Guide for Families
by Marlyn Doan

Starting Small in the Wilderness is a parent's guide to backcountry adventure with children. It includes a wide range of family camping activities for all seasons: day hiking, tent and car camping, backpacking, canoeing, snowshoeing, and cross-country skiing. The author gives detailed instructions for making clothing, raingear, packs and sleeping bags — all of which can be made inexpensively with modest sewing skills. Here, too, are guidelines for adults' special responsibilities when taking children into wild country: camp rules, first aid, toileting, and games and amusements during inclement weather. 288 pages, 4½x8. Line illus trations, diagrams, patterns, bibliography, index.

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BIKE TOURING: The Sierra Club Guide to Outings on Wheels
by Raymond Bridge

Bike Touring is an invaluable guide to travel by bicycle. Bike touring combines the self-sufficiency of backpacking with the mobility and freedom of bicycle travel — the ideal way to go a good distance and still enjoy the scenery.

This is a comprehensive guide and sourcebook to bike touring, covering what to look for in a touring bicycle, how to equip and maintain the bike, and how to choose clothing, camping gear, and other accessories. It describes how to pack the bike and how to plan short or long trips in North America or abroad, and it offers tips on camping with a bike and common hazards of the road. 464 pages, 4½x8. 60 illustrations, appendices, bibliography, index, checklist.

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THE SIERRA CLUB NATURALIST'S GUIDE to the Sierra Nevada
by Stephen Whitney

This Guide to the Sierra Nevada is an authoritative and comprehensive field guide to the natural history of one of America's wildest and most visited scenic regions.

Steve Whitney's descriptions of the Sierra's geological character, its weather, climate, and topography will be invaluable to the backpacker and the mountaineer. The identification of plant communities and the explanation of their distribution and the fauna they sustain provide a complete ecological portrait of these wilderness areas.

A. Starker Leopold writes about this guide: "*The Sierra Nevada* is a most remarkable manuscript. The information crammed into its pages is exhaustive beyond belief... it is extremely well-written, factual, and up-to-date." 544 pages, 4½x8. 230 line illustrations, 8 color plates, maps, diagrams, tables, bibliography, index.

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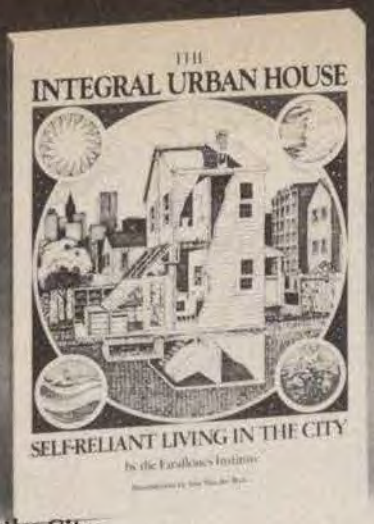

THE INTEGRAL URBAN HOUSE:

Self Reliant Living in the City

by the Farallones Institute
introduction by Sim Van der Ryn

Self-reliant as a farm, the Integral Urban House is a mid-sized house on a little land in Berkeley, California, where the owners raise their own food, recycle their garbage and stay warm with solar energy.

The Farallones Institute, an association of scientists, designers and technicians developing "appropriate technology," established the Integral Urban House in Berkeley in 1973. It is a working model of their designs, proof that self-reliant life is possible in a small space, in the city, where most people will continue to live. 512 pages, 8⅜x10⅞. Charts, diagrams, tables, maps, line drawings, working plans, and 16 black-and-white photographs.

Paper — Retail price: $12.95 Member price: $10.35

TRACK OF THE GRIZZLY

by Frank C. Craighead, Jr.

Track of the Grizzly is the culmination of a 13-year field study of the largest carnivore in America, the huge, elusive, and sadly endangered grizzly. Recognized as the world's leading authority on grizzly bears, Frank Craighead lived in Yellowstone National Park and with his colleagues tracked the bears deep into the wilderness and even to their winter dens. The result of their study is a fascinating story of the biology and behavior of this magnificent animal.

272 pages, 6¼ x9¼. 16 pages of black-and-white photos, 10 halftone illustrations, 5 maps.

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Environmentalists Met With Urban Activists in Detroit

City Care

Trust for Public Land photo

Koshland Park was originally two vacant lots and a burned-out tenement in San Francisco's nearly parkless Fillmore District. The park is adjacent to two low-income federal housing projects in a predominantly black neighborhood. Because Trust for Public Land is a private, flexible entity, it was able to accomplish a multi-property acquisition while keeping prices down.

AMY MEYER

CITY CARE: Toward a Coalition for the Urban Environment took place April 8 through 11 in the Radisson-Cadillac Hotel in downtown Detroit. The Sierra Club, the National Urban League and the Urban Environment Conference/Foundation were co-hosts to some 750 urban and environmental leaders who are trying to retain or to regain a partnership with nature in American cities. Participants listened to speeches and panel discussions, took field trips and jawboned with each other. Four federal agencies—Interior, HUD, Agriculture and EPA—plus a host of private organizations, individuals and foundations helped to pay the bills.

The primary goal of the conference was to give these leaders and organizations the experience of working together; then they would realize that everyone was tackling many of the same problems.

There were some unstated goals as well. One was to get Sierra Club leadership across the country, particularly in urban areas, to realize how much the health of cities affects proposals for such Club goals as energy conservation and land preservation. Another was to strengthen the Club's political efforts by establishing new allies for the conservation movement. But questions of grand policies were not as important as finding answers to a number of specific questions: Can the cities once again be desirable places for families to live so that the surrounding countryside can be preserved for parks, forests and farms? Can the inner cities be renewed without the wholesale displacement of people that occurs with most redevelopment and without driving property values so high that residents can no longer afford the improved neighborhood? For every job lost by construction workers who build new freeways for the cars of suburban

Trust for Public Land photo

Creating urban gardens from vacant lots is often the first environmental action undertaken by neighborhood activists. This is one of fourteen gardens planted on abandoned land obtained by the Trust for Public Land from the city of Newark, New Jersey, for back taxes owed.

commuters and city recreationists, isn't there an equivalent job in developing public transit that uses less energy per passenger mile and is less polluting?

The conference began on Sunday with a choice of a number of field trips. Much of the local hospitality was arranged, then and subsequently, by the Detroit Group of the Mackinac Chapter of the Club. I took the trip to Belle Isle, a 1000-acre island park in the middle of the Detroit River. In an icy rainstorm we visited the magnificent 60-year-old stone Casino, now a senior-citizen center; we strolled through the conservatory and a handsome modern nature center and drove through landscaped areas comparable to Central Park or Golden Gate Park.

In contrast, urban decay was evident in the unrepaired and vandalized senior-center bathrooms. Also, members of the Friends of Belle Isle were dismayed by the modern lunch counter in the Casino building, a desecration of its architecture, and they complained bitterly about new construction in the park. When I asked if they speak out when unsuitable developments are proposed, they said that they do—but with little effect.

I developed a sudden respect for what we have accomplished in California through open processes for public decisions. Yes, we have endless evenings of community meetings, but we also have planning that is responsive to the community. At this conference, I could see, people from different parts of the country would compare the tools available for citizen action.

Who came to the conference? Who were the people? They came by invitations widely dispersed to individuals and organizations recommended by the sponsors' staffs and volunteers. Those who contributed time as panelists or moderators could receive some subsidy. Since the cost of travel from the West was highest, that group was smallest. The largest bloc came, naturally, from the Midwest.

The "people to people" part of the conference was organized into workshops, field trips and "core groups." After Monday morning's speeches, I went off to Core Group Session I. There were more than 20 such groups—each with about 20 participants from widely divergent economic, geographic, social and racial backgrounds. Our group sat in a circle at one end of a large meeting room, and another group met at the other end.

Our leader asked us to introduce ourselves and to give our understanding of what this group was meeting for. No one, frankly, seemed to know very much about it. But we stumbled along and eventually figured out that the intention of the core groups was to discover common agendas and concerns. And we did: There are jobs to be found in cleaning up the cities; we all breathe the same air and drink the same water.

After the hour was over, I ran into Judith Kunofsky, a Club staff member, at lunch. Her core group seemed to have been very different; they got down to details immediately. One Urban League executive director said he had come to the conference because he was being asked to support a clean-water program in his community, and he wanted to learn

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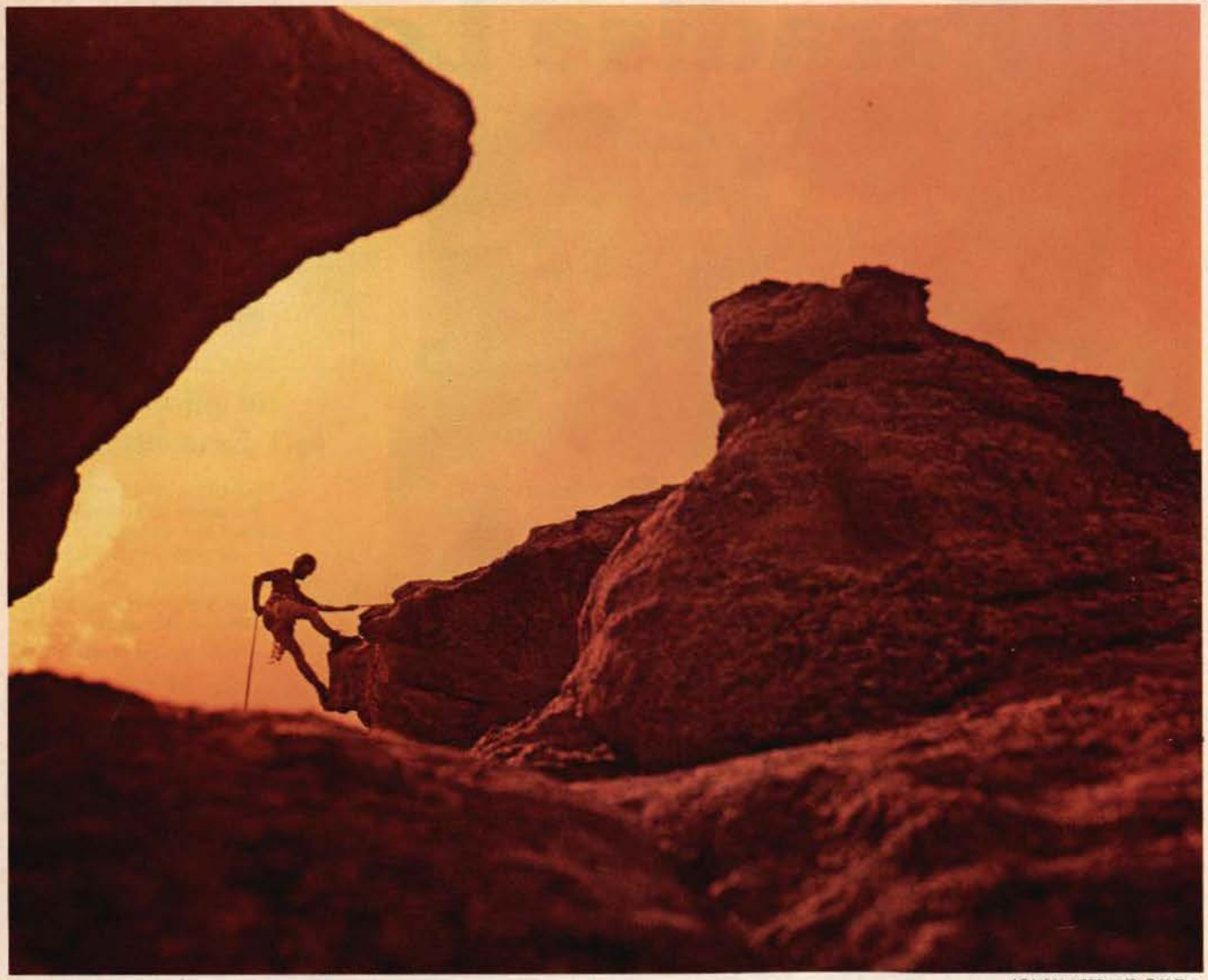

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about the issues. A professor of land-use planning was there to exchange experiences with others about federal regulators: Do they really, he wondered, know as little about what they're regulating as his experience would indicate? A representative of the Philadelphia Bicycle Coalition wanted to learn how to improve cities without displacing current residents. An urban activist who works primarily on economic-growth issues wanted to learn what environmentalists had to offer.

It was 9 p.m. before the day's scheduled sessions finally ended, and we had a chance to look for the people from other parts of the country we'd heard about or glimpsed during the day—people we had come to meet and work with. I had a beer and a chance to talk with park people from Indiana and Southern California who were planning an informal caucus on parks for the next evening—after 9, of course.

The next morning it was my turn to be on a panel presided over by an Urban League leader from Michigan. There was a good slide presentation of a summer youth park-work program sponsored by the New York Parks Council and another by Charles Newman on the Overton Park highway battle. In both instances local people had used particular skills and expertise, in "workreation" and law, in the effort to preserve a livable environment. In my talk I described the establishment of the Golden Gate National Recreation Area as an example of how people can apply political expertise to preserve an outstanding part of the American land.

At the luncheon that day, the political will of the meeting unexpectedly emerged. The Three Mile Island debacle had been unfolding as the conference progressed. A group of conferees tried to reach the microphone and introduce a resolution to curtail development of nuclear energy and to promote alternative energy resources. A hotel employee decided they were "outsiders," threatened to call "security," and pulled the plug on the microphone. The energy activists took this in stride; they distributed copies of their resolution by hand. The lesson was obvious: if you invite hundreds of activists to a conference, they must be given the opportunity to express themselves.

After lunch I went on a field trip, one of a number to observe ongoing projects in and around Detroit; I attended the session called "Greening of Vacant Community Land: Recreation, Urban Gardening and Trees," a tour and panel discussion. Two of the "tour facilitators" came from the Youth Committee for Progress, a local nonprofit environmental and urban-gardening program. A ten-minute bus ride took us to a central-city neighborhood where houses that would cost, judging from external appearance, $200,000 and up in San Francisco (admittedly an expensive real-estate market) were available for $17,500, we were told, with $1500 down. Every half-block or so there was an abandoned home. For example, on one street of gracious houses and lawns near the Edison Historic District there were three boarded-up and abandoned homes, the result of misguided housing policies of many years ago. This pattern was repeated block after block.

We continued past areas of new homes, areas of proposed development, also other older-home areas, to the Considine Recreation Center. There an enthusiastic discussion took place among the workshop panelists from New York City, Dayton, Seattle and Newark and representatives of this predominantly black neighborhood. We talked about methods of and approaches to urban gardening: getting the lead out of the soil, providing for allotment gardens and for purchase of small city lots for farms that would not be displaced by a landlord. A spirit of self-help prevailed.

We couldn't see the Edison Historic District—there wasn't enough time—but the beautiful homes we glimpsed were saved from urban renewal by block clubs in this neighborhood.

When we returned to the hotel, the core groups were again in session. I visited one chaired by Phoenix Urban League director Junius Bowman. A dozen people were seated or sprawled comfortably in a hotel suite. The chemistry was positive; the conversation was lively and intelligent. The nuclear resolution was discussed, revised and signed by some.

The "Urban Environmentalists'" dinner Tuesday night featured the two most memorable speeches of the conference. Jeanne Malchon of the Pinellas County (Florida) board of commissioners spoke first. She said that her environmental interest had developed out of concern for the deplorable conditions in her own city. "We middle-aged, middle-class women are still out there; use us . . . Beneath this well-brassiered bosom beats the heart of the true radical." Four years ago she moved from activist to decision-maker, first by appointment, then by election. She said that she felt most activism was too little, too late and too narrow. The crucial efforts must occur before the decision-making body becomes too polarized for compromise. After citing examples from her experience, she spoke of placing a dollar value on human life. A common expression is that "extra deaths" will occur after a pollution catastrophe; "Why *extra* deaths?" she asked. "Doesn't everyone get only one?"

Ramon Rueda spoke next. A Puerto Rican born in East Harlem, he moved to the Bronx at age seven after his home was torn down in order to make way for public housing. His special inspiration was Martin Luther King's "I have a dream." After King's death, he refused military induction, went underground to avoid draft-evasion charges and began to work in the South Bronx, "helping instead of destroying." Twelve people "liberated" an apartment building at 1186 Washington Street and began to rebuild it. The building later became famous when President Carter visited it in October 1977, as a demonstration of people helping themselves. The federal government came up with a $1.5-billion plan after this visit, but the program was designed along the lines of antiquated large-scale approaches to urban renewal, with no local partnership and no community involvement. "The President is behind the partner approach," Rueda said, but those who carry out policies "lack the guts to deal with people in the streets." He called for a coalition to improve the quality of life in cities and for support of the neighborhood self-help development, livable cities and urban parks programs of the Carter Administration. He presented the nuclear resolution to the crowd; it received warm support.

The speeches of these two dedicated people more than anything else put the conference in perspective for me. The conference had two themes: One was the urban policies of the Carter Administration, and the other was the sustained do-it-yourself, person-to-person, labor-intensive efforts of activists at the grassroots level. In the Sierra Club, one of the best examples is the Inner City Outings program through which inner-city youngsters and adults have a chance to learn to be on their own, backpacking and camping in the wild. For such programs, government, corporation and

Greening the South Bronx

JOHN HOLTZCLAW

From City Care in Detroit I ventured back to the burned-out, impoverished South Bronx to watch neighborhood people transform the carcasses and rubble of old tenements into living neighborhoods.

At the conference, Ramon Rueda, head of People's Development Corporation (PDC, 500 E. 167th St., New York 10456), had spoken powerfully for conservation, solar power, neighborhood control and elimination of nuclear power. I went to visit PDC, where it is happening.

PDC's headquarters (and woodshop) is a beehive of activity when I arrive. Job assignments are being meted out to workers. Ramon prepares to leave for a meeting with city officials. Others are writing a financial proposal. The payroll is being prepared. A planning conference is in session. The office hums. All are Puerto Ricans and blacks from the neighborhood. It is hard to believe that these were "unskilled" and unmotivated until recently—in an area written off as hopeless.

Victor, assigned to show me around, manages the crew rehabilitating a gutted old apartment house on Washington Avenue. The workers' spirits and enthusiasm are high; they are building spacious modern apartments that they can purchase with "sweat equity" (equity earned by labor) or rent at reasonable prices. Many materials recycled from nearby buildings are used; cabinets and other parts are built in PDC's woodshop.

Down the street stands a handsome six-story apartment house PDC recently completed. It is well-insulated; on its roof, solar panels heat water for direct use and for central heating. Don't tell these people that solar power isn't ready!

Fresh out of high school and unskilled, Victor helped build an earlier apartment house; now he manages construction of this one—only the second apartment house he's worked on—and attends college. His sights are set on law school. This is not the too-common ghetto story of helplessness, of residents victimized and worn down by a brutal world over which they have no control. This is a story of residents in a nine-block area rebelling, organizing, and building a future for which they take responsibility.

PDC has helped to organize tenants in other buildings to weatherize and improve those structures, and thus stabilize their tenancy. They've built parks on abandoned lots; they run a recycling program and are starting a solar greenhouse to grow organic vegetables, fish, earthworms, rabbits and poultry. They are seeking additional federal and city funds to expand even further; they want their neighborhood enterprises to include a laundromat, a pharmacy, a food service, a restaurant, a bakery, a security service, a credit union and child-care and youth-training programs.

Thoroughly inspired, I then visit the office of another dynamic friend from City Care—Irma Fleck, head of the Bronx Frontier Development Corporation (1080 Leggett Ave., New York 10474). This is another neighborhood success story.

In their newly rehabilitated offices above a railroad yard, recently "unskilled" black, Puerto Rican and white workers are busy preparing the Bronx Frontier's annual report and planning this year's work and activities.

From here, Irma takes me to "The Ranch" along the East River with its excellent view of Manhattan, where they compost leaves and the wastes from vegetable markets and sewage plants. A windmill is being constructed to power the huge composting operation, to sell electricity to Con Edison and as a model for teaching the fundamentals of wind power.

Irma drives me by an abandoned lot. Though wedged between apartment houses, it is blossoming as a neighborhood garden. With Bronx Frontier's botanical advice, the neighbors cultivate and harvest crops for their own consumption. Beats those high grocery bills.

A half-block down the street, Irma stops in front of a rubble-strewn lot, the ruins of a previous building. From a stoop next door two women yell, "Why don't you help us make a garden here?" Irma yells back, "We'll have the bulldozers here in three weeks!" And they will. With neighborhood help, they'll clear the lot, crush the rock and brick and mix it with their composted fertilizer. Neighbors will plant another urban garden.

Bronx Frontier has converted an old bookmobile into a traveling kitchen. They teach cooking and nutrition to more than 500 people each week. They are developing job-training programs for young minority adults and helping law "offenders" return to society as productive workers.

By organizing and taking control of their local environment, neighborhoods are creating skilled, proud and responsible residents, improved environments, cleaner air, reduced crime, green spaces, food and power. And they are helping to reduce sprawl and to conserve land, energy and resources. Certainly an urban environmentalist's dream.

What can we do to help? We can get involved in our own neighborhoods. Direct interested people to those, like Ramon Rueda and Irma Fleck, who have succeeded, and to environmental organizations such as the Sierra Club, the Trust for Public Land (82 2nd St., San Francisco, California 94105) or the Institute for Local Self-Reliance (1717 18th St. NW, Washington, DC 20009). □

John Holtzclaw chairs the San Francisco Bay Chapter Conservation Committee.

foundation funding are seen as seed-money, not as permanent subsidies.

After dinner some 30 people attended the informal caucus on parks. We eventually divided into two groups. Those most interested in city and regional park systems worked on a resolution and a mailing list that would be distributed to all participants. Those involved in the special problems of national parks in urban areas discussed the need for prompt appropriation of money to purchase lands designated for inclusion in a park in order to avoid price escalation; also, the fight to implement the National Parks Access Act and the need for a larger National Park Service budget to meet the requirements of the ever-increasing numbers of people who use the parks. For me, it was the liveliest meeting of the conference.

Other caucuses dealt with air pollution and transportation, shopping malls, housing and nuclear power.

Early in the conference, Judith Kunofsky felt that stereotyping abounded in the workshops and core groups she attended or heard about. Some environmentalists seemed to presume that urban activists would need to have explained to them the relationships between controlling sprawl and protecting agricultural lands on the one hand, and preserving cities on the other. Some urban activists seemed to presume that the environmentalists attending were latecomers to the urban scene, with only a token or shallow commitment to cities. Everyone was pleasantly surprised. Stereotypes fell. On Wednesday afternoon, in the workshop in "Innovative Land-Use Controls to Prevent Sprawl and Exclusionary Zoning," one panel member finally raised a question that had not, to her knowledge, reached the surface of the conference until then: Did people think that environmentalists were trying to keep blacks and the urban poor out of suburbia? That we were responsible for the housing problems of the poor? A heated discussion ensued, and true feelings emerged only slowly. One housing activist accused environmentalists of "downzoning" (reducing the number of allowable structures, thus raising housing costs) to keep out the poor. "Wait a minute!" another participant interrupted. "I'm an environmentalist, and I resent that. I certainly don't have those motives—and not all of us support downzoning all the time."

"I guess you're right," the housing activist replied. "I shouldn't generalize about environmentalists." It was a moment of confrontation and resolution. Only by face-to-face meetings at conferences and elsewhere can misconceptions, differing priorities and stereotypes be sorted out.

The core groups met one last time on Wednesday morning. Judy's group got down to work on recommendations to be presented later that morning. The group solicited and listened to anyone's ideas, including traditional environmental concerns: clean air and water, enforcement of toxic-substances laws, funding for urban parks. Some less-traditional concepts were also put forward: a full-employment policy emphasizing environmentally sound jobs, an end to blackmailing employees by asking them to "choose" between jobs and health. The core group supported firm urban-growth boundaries, learning from each other's organizing techniques, and greater funding for public-transit systems. Everyone tried to be sensitive to the priorities of others, but the true test will be the political coalitions formed (or not formed) on these issues.

Each core group and informal caucus was to be given 90 seconds to summarize their ideas at the last meeting on Wednesday morning. The rest of the core groups' findings would be printed and distibuted. Later, I went to a caucus of people from the western states. A mailing list was developed, and plans were made to hold local and regional meetings in the future.

Then everyone gathered in the Grand Ballroom once again, this time to hear the capsule speeches and the final address, by Barbara Blum. With the applause for her statement, the conference adjourned.

The real test of any conference is what happens afterwards to the people who came. Since many people did meet leaders of organizations from other parts of the country and individuals from their own areas they had never worked with before, City Care could be called a great success. In the month since the conference ended, I have received mailings from Sacramento, Cleveland, upstate New York and New York City; I have also sent out some letters. "Networking," one of the hoped-for results, seems to be under way. A good conference is a catalyst for future relationships.

A good conference also advances and spreads ideals, ideas and programs. At these meetings, the Carter Administration had the chance to explain their over-

view and where the money will go. We heard about—and praised—the Carter parks program. We heard about widespread, small-scale infusions of money that have restored and protected the environment, or that will create jobs and give new tools to communities. The Carter representatives were concerned and enthusiastic. We had the paints, the brushes and the canvas—they were all of good quality—yet there was no vision, no image, no picture. The most vital component—a workable, farsighted energy policy—was missing. Nuclear and oil power still get the big bucks, as does the automobile. Alternative energy development, mass-transit and energy conservation get a little lip service and a pittance. A rational energy policy could do more for our cities than any other program that could be promulgated by the Administration.

The underlying meaning of the conference was well-expressed in a *Detroit Free Press* editorial of April 10:

> "Without question, we need to protect the Alaskan lands, to preserve significant wilderness areas, to extend our national parks, refuges and wild and scenic river systems. But most of us . . . cannot go looking for the good life on the mountain peaks and white-water rivers. We have got to find it on Woodward Avenue, or in West Dearborn or places just like them—or we will never find it at all. The 'environment' is not on the mountaintops, it's wherever we live, and it will be what we make of it."

Participation by environmentalists in urban gardening, reforestation, urban renewal, pollution control, alternative energy-resource development, energy conservation, health care, recreation and park programs is a vital component of keeping and restoring the quality of urban life. I feel that Sierra Club participants brought this understanding with them to Detroit and went home having shared their perspective with others while enlarging the dimensions of their own perceptions. In the long run, their involvement in this conference will have a significant effect on the Club's local and national programs. □

Amy Meyer is a San Francisco Recreation and Parks Commissioner and secretary of the Golden Gate National Recreation Area Advisory Commission.

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Mardie: Yes, that's a hard one, isn't it? Maybe it's something in the genes to begin with—a natural curiosity about wild places. There is a value in having an experience alone in the wilderness, even if for only a few hours. I think people can get a lot from experiencing a landscape alone. Even if it's only for a short time, and you're alone in camp, wondering why your friend doesn't come back, or if you're left alone on a ridge while your husband goes off somewhere for a while. I don't know how you can implant a love of natural things in people by just saying words to them. I think you have to take them out to a place. I had a great experience working with a summer biology field course at the Teton Science School. I have seen what the experience out here does for the students; something they're never going to forget. They all want to come back and don't want to leave. Those young people are going to be the leaders of our country someday, and I hope they will be the leaders of the environmental movement in their generation.

Fran: *That's why environmental education is so important, getting to the kids while they're young, influencing the next generation and the generation after that.*
Mardie: Yes, and it's not just the lessons they learn in the classroom, but also what happens to them out in these beautiful hills and on backpacking trips that is so very important.

Fran: *You and your husband have written about places of enchantment like the Tetons and about how lucky you were to find these places. Do you think with all the development going on that it's getting increasingly harder to find such places? Or would you have found them no matter where you were?*
Mardie: I think we probably would have gone on searching whether we found them or not. I think it's still possible to find them. But then again, whether we are going to have enough places of enchantment left depends on how man treats his environment. It makes me shudder to read in travel magazines about all the new luxury hotels rising on the white sand beaches in the Pacific and places like that. I think we are overreaching ourselves. It is a horrible idea that man has to take his city luxury with him everywhere he goes. I suppose I have an almost religious feeling about the importance of wilderness areas where structures are not allowed. They are the refuge and the leaven that will save our society. Man needs to compare himself to places and lives that are not his and not his to control. We all need to learn a little humility. I really don't feel very sympathetic with the old Judeo-Christian ethic that man is the master of the universe and should have dominion over it, because I think we have abused that dominion.

Joan Nice

Mardie Murie on skis

Fran: *I really liked your novel about Eskimo life,* Island Between. *The people seemed so humble, so reverent about the way they lived their lives.*
Mardie: They had to accommodate themselves to that harsh environment. They had to come to terms with it, and that is how they did it—by feeling friendly with it, no matter how harsh it was. They seemed to develop an ability not to feel cold the way some of the rest of us do, not to acknowledge hardships. Well, a little bit the way Olaus did. He never would intimate that the mosquitoes bothered him and he never complained about being too cold or too hot. He was doing something interesting to him in a place that interested him.

Fran: *Is the premise of native cultures different from ours? They don't live in the Judeo-Christian tradition.*
Mardie: Yes, they have a very strong feeling about all of the animals and birds among which they lived. They had a feeling that each of those creatures had a spirit, comparable to their own spirit. And that's why they had all these sacrifices and ceremonies about placating the spirits of the animals. When they took a seal, for instance, they would pour water over its head, so the seal spirit would send them more seals in the future. And that's a different attitude than the white hunters had towards wildlife. It may have come from necessity, or it may have come from way back when they felt they had to make a gesture of propitiation to be sure they would have a future supply of food.

Fran: *In our society, women have been characterized as the keepers of nature. We're supposedly more emotional, forming the center of the home. Is that true of the native cultures you know in Alaska?*
Mardie: Well, the woman's place was to make everything comfortable for the hunters; the hunters were the important people, of course, because they brought the food. The women saw that the men's clothing was all properly sewed, waterproof and warm, so that no mischance could come to the men because of faulty preparation on the part of the women. And the women always had to see that the men were fed as soon as they came in, and I suppose all that was the women's part in keeping their way of life going.

Fran: *I couldn't do that and only that, not having been brought up in such a culture.*
Mardie: I think once in a while there was a little rebellion among those Indian women. They probably wanted a little more recognition, or maybe some of them wanted to participate in some of those exciting hunts. But I don't know if any of them ever did, except through the ceremonies.

Fran: *What about women environmentalists? Are we just helping men in their ceremonies?*
Mardie: Not any more. I think we're talking with the men now and that they have accepted us more as equal partners in conservation groups. I personally haven't felt any discrimination. I think that the day is past when a woman's word would be taken for less in the field of conservation.

Fran: *I wish we had more women as spokespeople, though. Do you know that some people in the women's movement discourage women from volunteering? They say that women do a lot of work, but when a paid staff position is open, a man will get it.*
Mardie: Yes, that's probably true in

some cases. I feel, though, that period is about over, but I can't judge that kind of thing because I'm not out in the marketplace working. I try to think back over all the years I've been mixed up in conservation and I can't recall a case where a woman's voice wasn't listened to. Perhaps because the concern for the environment involves a gentler type of interest than does ordinary business, people may be inclined to pay more attention to women's thoughts than they ordinarily would be.

Fran: *It's a gentle thing, this love of the land.*
Mardie: That's what the Indians would have taught us, if we had listened to them instead of pushing them around. One of the Indian chiefs said, "We cannot sell you our land; we do not own it. The land belongs to the Great Spirit." If we are to survive at all, someday we will have a whole different concept of land ownership, of private property.

Fran: *I live in a high-rise apartment building. I live alone. I have a toaster, a television set and a blender. The woman next door lives alone. She has a toaster, a television set and a blender. And the people next door to her have the same things. Each of us with all the same belongings, living so close to each other. It appalls me.*
Mardie: Yes, it's a waste of resources. Yet I can't say that the Alaska pipeline is entirely wrong, that we shouldn't take any resources out of Alaska; I have a car that burns gasoline. I have an oil furnace in my house, an electric stove and a water heater—all those things.

Fran: *It's a matter of proportion.*
Mardie: Yes, a matter of proportion. And it's very hard to teach each individual to be more careful with resources. It's a terrific job that has to be done.

Fran: *I'm convinced that we lose that proper perspective toward resources and nature because somehow we lose that sense of love, curiosity and gentleness.*
Mardie: And right now we need to reach these core feelings, the reasons for things. Conservation comes down to how much people care about their world. I've often said that I'm an optimist, but perhaps that's because I'm a coward and I can't bring myself to face the facts. Everything is going so fast, there are too many of us and we're using everything up. Where can it end? Perhaps, though, we'll be able to repeat history. So many times I think that we're right on the brink of some disaster and then some smart person has a bright idea. That's the American spirit. The young people I know give me great hope. They do care about what's left of the wild world and they are willing to put their efforts into it. If you look around you, Frances, think of all the young people you know who are working in the environmental movement today.

Fran: *Yes, that's true in most of the conservation organizations. Those years when your husband was director of The Wilderness Society, was that an exciting time?*
Mardie: Yes, that was the best time. I don't mean to say anything against the U.S. Fish and Wildlife Service, but any government bureau has more restrictions and a little less freedom than a private organization. When Olaus became director of The Wilderness Society, it seemed that our lives just blossomed. He felt free to do what he wanted to do. He felt his studies of animals had reached a point where he was more concerned with trying to preserve their habitat than with doing more studies of them, so this new job came just at the right time and in the right way.

Fran: *So that's how he got into citizen action.*
Mardie: Yes, and it's so important. I had a letter from George Schaller recently. He said that having worked in foreign countries so long he now feels that citizen action groups are most important in saving endangered species. He said that governments are too slow to act and afraid to act. That interested me. I feel that citizen action groups are actually a very strong influence on the government, because of that extra freedom they have. I don't know why government has to be so cumbersome.

Fran: *When our government was set up 200 years ago, no one expected it to have to serve two hundred million people.*
Mardie: Everything would be so much simpler if we were fewer.

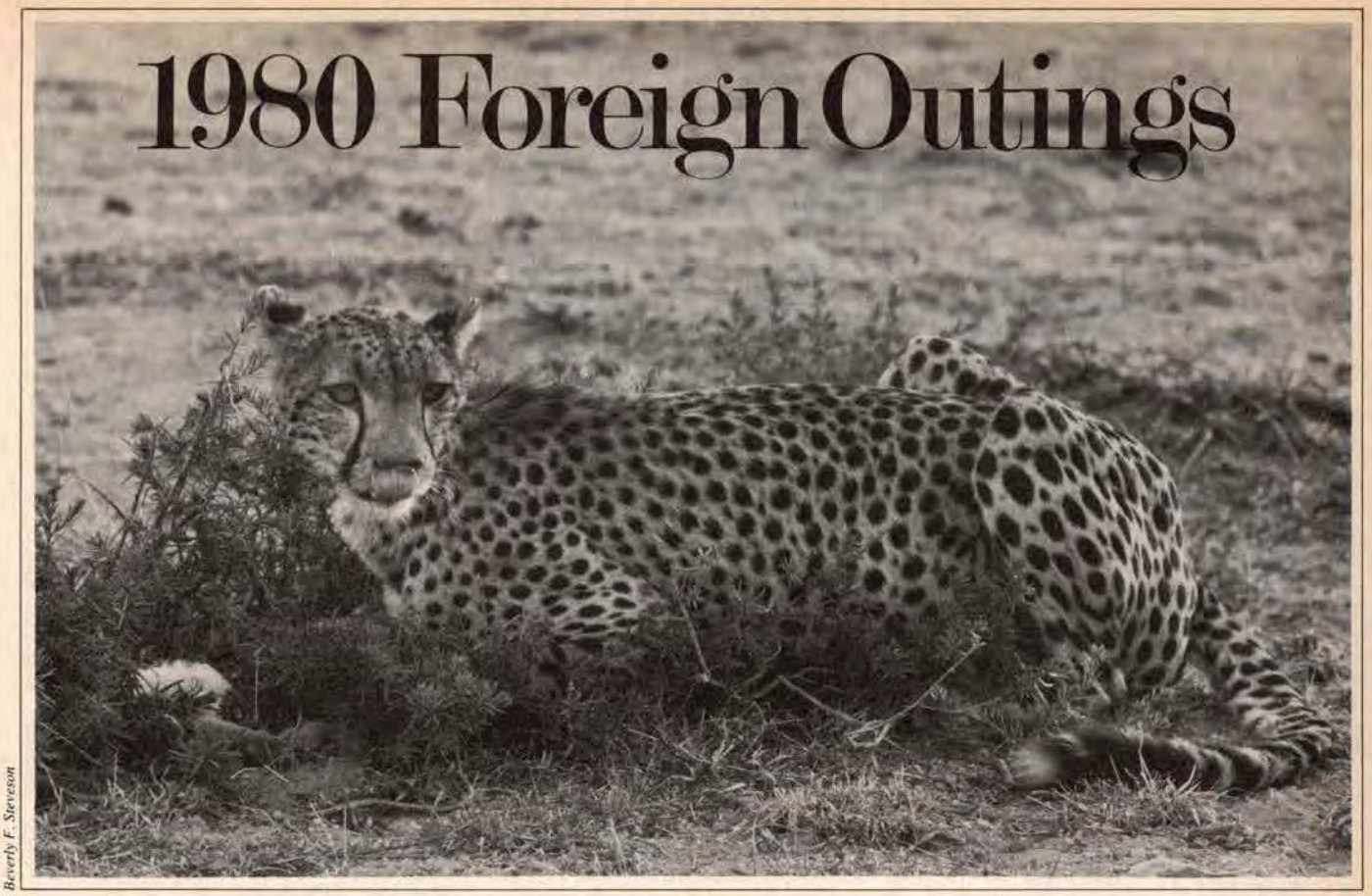
Fran: *What do you think your husband would be interested in now?*
Mardie: He'd be interested in the Alaska lands question, and he'd be interested in trying to save what little is left of Jackson Hole.

Fran: *What do you think is the right course of action for Jackson Hole?*
Mardie: I think we need a bill from Congress that will at least make it possible to procure easements or development rights on the private lands that are left. Some of the meadow lands south of Jackson are a beautiful and integral part of the whole valley. I lay in bed this morning thinking how the Bible says you cannot serve both God and mammon, and too many of us today are serving mammon. Too many of the people who have come to Jackson fairly recently see a chance to make money from the land.

Fran: *That's such a paradox, isn't it? They come here to love the land, but first there has to be a motel with a swimming pool!*
Mardie: And a golf course—all the things they had back in the city. It's a terrible paradox. That's what they don't realize about Jackson Hole; they can't accept it as a place whose value is in its difference. They want to bring all these other comforts and luxuries with them. The rich people come and are able to pay the exorbitant prices for land. Prices are high because people see the opportunity to make some money, and prices go up because of just plain greed. It's a puzzling thing. This is still a special place and it should have special treatment; purely materialistic motives should not be allowed to change it. It sounds selfish to say that we have enough people here now and we don't need any more, for I have lived here for 50 years. I've had all this. I'd be willing to move someplace else and stay there the rest of my life if I thought that by doing so I would save this wonderful place. There is a limit to how many people this valley can hold. It's just a physical fact. Ninety-five percent of the land is under federal ownership. Some people say 100,000 people could live south of the park boundary if it were carefully planned. And there's all this national forest land and national park land. But you know very well if there were that many people, the national park would no longer be a national park and neither would the national forest continue to be a real forest. There would be too much impact from human occupation. That's just a fact, and I don't see what we can do about it, except limit growth.

Dave Brower wrote something some years ago, something like: "For every day that we spend in the high mountains, we should pay a little price to the future." We owe something to the future. Some of us have been so fortunate—I've had enough experiences for twelve lifetimes. So I feel that the least I can do is to try to save what little we have left for the future. I know a lot of young people will appreciate this country, if given a chance. But they can't if the country isn't there. It all comes back to what things we think are important in life. □

1980 Foreign Outings



Beverly F. Stevenson

IF YOU WILL set aside some time and money, next year you can enjoy a foreign jaunt that was not available to very many as recently as 20 years ago. Sierra Club foreign trips are unique, putting you close to the soil, the animals and peoples of exotic lands.

(530) Tanzania Wildlife, Natural History Safari—January 4-27. Leader, Betty Osborn, 515 Shasta Way, Mill Valley, CA 94941.

Tanzania is the heart of East Africa's game country. On this journey we will explore seven of the most famous preserves, travelling by landrover with a naturalist as guide and camping as we go. Included also is a visit to Olduvai Gorge, 1000-year-old ruins, and the nomadic Masai tribe. A walk high on Kilimanjaro is a feature. Approximate cost: $2470.

(535) East Africa: Arabian Dhow Sailing Adventure, Camping, Gameviewing Safari, Kenya—February (4 weeks). Coordinator, Betty Osborn, 515 Shasta Way, Mill Valley, CA 94941.

Our dhow will set sail from the Island of Lamu, explore the archipelago and sail south to Mombasa. We live partly on the dhow or on isolated tropical beaches, swim, visit coastal villages and towns seldom seen by travelers, and walk the remote countryside. Rounding out our trip, we camp and enjoy game drives in Tsavo West National Park, search out wild game and birdlife found there. An exotic trip for those who enjoy marine life and want contact with the ancient maritime culture. Approximate cost: $2140.

(545) Mountains of Patagonia, Argentina and Chile—February 2-24. Leader, Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611.

A splendid, remote wilderness lies in southernmost South America, and straddles the border between Argentina and Chile. To this Patagonian wonderland we will journey to explore and enjoy its exotic flora and fauna. A local staff will assist in the many and varied activities of our outing days. Hiking will be fairly moderate. Brief layovers in Buenos Aires and Santiago de Chile are included. Limit is 20 persons. Leader approval required Approximate cost: $1850.

(537) Galapagos Islands, Ecuador—March. Leader, Ray Des Camp. 510 Tyndall St., Los Altos, CA 94022.

(592) Galapagos Islands, Ecuador—June-July. Leader, Martin Friedman, 353 Montford Ave., Mill Valley, CA 94941.

Explore Darwin's vast microcosm of evolution for two full weeks. From small sailboats and afoot, in moist March greenness or the cooler, drier summer, we will observe, study and photograph wildlife unafraid of man—giant tortoises, birds endemic to each island, marine and land iguanas, sea lion colonies, and much of the unique beauty of these "Enchanted Isles." Swim in crystalline lagoons and coves and visit rain forests, volcanoes and the Darwin Research Station on excursions and overnight hikes. Approximate cost: $1995.

(540) French Polynesia/Cook Islands, South Pacific—March 9-30. Leader, Mary-Ed Bol, 6619 E. Ocotillo Rd., Scottsdale, AZ 85253.

From L.A., we go, at the end of the rainy season, to the unspoiled and delightful Cook Islands including Aitutaki with its Maori ways and unique lagoon. Following Captain Cook's route to French Polynesia, we will stay with Tahitian families. We'll visit the little-known outer islands with their combination of Tahitian and French cultures. Besides tropical plants and birds, these "Bali Hai" isles offer swimming, hiking, reef-walking, Tahitian feasting, visiting ancient Maraes and enjoying the South Pacific's unhurried magic. Approximate cost: $900.

(555) Ski Touring in Norway—March 7-21. Leader, Betty Osborn, 515 Shasta Way, Mill Valley, CA 94941.

We will be guided on daily excursions and perhaps an overnight by members of the Norwegian Hiking Club (DNT), who will teach Norwegian touring techniques. We will base camp at DNT lodges in three scenic touring areas: at Finsehytta (on Oslo-Bergen railroad) overlooking rolling Hardangervidda plateau; Rondvassbu, hidden among snow hills of Rondana National Park; Gjendesheim, nestled among famous Jotunheimen mountains. An optional ski tour is being considered. Leader approval required. Approximate cost: $835.

(560) Spring Trek and Basecamp, Balephi Khola, Nepal—April 4-27. Leader, John G. Carter, Box 991, Mendon, UT 84325.

Northeast of Kathmandu the rugged Balephi River valley reaches to the Tibetan border in the Jugal Himal with Dorje Lakpa, its prominent peak, visible from Kathmandu. We will trek for five days into our basecamp at 10,000 feet near Chingtong Gompa and explore the higher reaches of this region and its glaciers. Our return may be via Panch

Pokhari, a high lake, if conditions in the 13,000-foot passes allow. Rhododendrons should be in bloom at this time, birds plentiful and active, and the forests at their best. Limit fifteen persons. Leader approval needed. Approximate cost: $1020.

(575) Walking Tour of Crete—May 31-June 14. Leaders, Kathy and Robin Brooks, 910 Kennedy Dr., Capitola, CA 95010.

In Crete the words for stranger and for friend are identical. Add rugged, barren mountains with 8000-foot peaks, sparkling Mediterranean beaches, and 4000 years of history going back to Minoan Crete, to the hospitality of the people and you have the ingredients for a unique experience. We will hike the Gorge of Samaria, the White Mountains and Mt. Ida and see the famed ruins of Knossos. May be combined with trip #580 (John Ricker's trip to Mainland Greece). Approximate cost: $720.

(580) Trekking in Greece—June 16-30. Leader, John Ricker, 2950 North 7th St., Phoenix, AZ 85014.

Friendly, hospitable people will make it easy to stay away from tourist resorts and large cities. We will use public transportation and stay in small hotels and family homes when possible. Most of the trip will be in the mountains of northern Greece, but will include a trip to one of the less well-known islands. This trip can easily be combined with trip #575, Walking Tour of Crete. Approximate cost: $935.

(585) Walking in England's West Country—June 18-July 6. Leader, Mike Maule, 3608 Darby Rd., Bryn Mawr, PA 19010.

By land and sea we will explore mystical Devon and Cornwall, land of legend and literature. Included will be visits to stone-age ruins, haunting moors, ancient industrial developments, quaint villages and dramatic coasts. This area also abounds in a wide variety of bird life and flora. Nights will be spent in farmhouses, small hotels and caravan sites. Hiking is planned as moderate, keeping in mind that weather could be inclement. Minimum age: 13. Approximate cost: $1085.

R. Dickey

(590) Papua New Guinea, River Rafting and Trekking in the South Pacific—June-July. Leader, Blaine LeCheminant, 1857 Via Barrett, San Lorenzo, CA 94580.

Of all like-sized areas on the globe, Papua New Guinea is said to have the highest proportion of mountainous country, the wildest rivers and the most luxuriant vegetation. Our journey traverses the most exciting river in the South Pacific, the Watut, and includes hiking the country's highest peak, Mt. Wilhelm at 15,000 feet. Also climb to the caldera of an active volcano and trek the historic Kokoda Trail. Approximate cost: $2225.

(595) Caucasus Mountains, U.S.S.R.—August 11-September 4. Leader, Carl Denison, 88 N. Lake Shore Dr., Brookfield, CT 06804.

Three days of sightseeing in Moscow are followed by twelve days of hiking or mountain climbing in the Caucasus Mountains. After preliminary training and toughening hikes, the principal climb will be up Mt. Elbrus, at 18,500 feet, the highest mountain in Europe. This does not require technical mountain-climbing skills, but may be difficult because of the elevation and possible strong, cold winds. A separate section for technical mountain climbing may be possible if there is sufficient interest. Approximate cost: $1215.

(600) Climbing in Bolivia—July 7-28. Leaders, Les Wilson and Beverly Belanger, 570 Woodmont Ave., Berkeley, CA 94708.

The snow-capped peaks of the Cordillera Real are within a day's travel of the old Spanish city of La Paz. The emphasis will be on non-technical climbing and enjoyment of the mountains. However the peaks of the Cordillera rise to over 21,000 feet, and experience in glacier travel and ice climbing with axe, ropes and screws is necessary. Leader approval required. Approximate cost: $1250.

(605) Western Pyrenees, Spain—June 22-July 14. Leader, John Doering, 6435 Freedom Blvd., Aptos, CA 95003.

Two weeks hiking in the spectacular valleys of western and mid-Pyrenees including five days on the French side, followed by a week in the Sierra de Grados near Madrid. Glaciers, lakes, optional peaks (3200 meters), chamois. Moderate, six to fourteen kilometers per day. Approximate cost: $985.

Betty Pollock

(610) Kenya Highlands Walking and Game Safari—July 8-August 3. (Optional four-day climb on Mt. Kenya.) Coordinator, Betty Osborn, 515 Shasta Way, Mill Valley, CA 94941.

An unusual walking, camping, photography adventure in northern Kenya, combined with some game driving in Samburu, Masai Mara parks. With our naturalist-guide, we usually walk each day to a new campsite while exploring the countryside, observing, photographing wild game and bird varieties. Gear, food carried by support truck. We carry light day-packs, set up our own small tents. We walk through grass fields of Loita Hills, along banks of Mara River, uplands of Mathews Range, shores of Lake Nakuru, moorlands of Mt. Kenya. Hiking moderate; leader approval required. Approximate cost: $2050.

(620) France: The Alps to the Mediterranean—July 1-16. Leader, Lynne Simpson, 1300 Carter Rd., Sacramento, CA 95825.

Rural alpine France with its hospitable people will be the focus of this two-week trip as we follow the Alps down from Geneva to Nice. French views of conservation will be emphasized as we visit several national parks. Hikes, including one overnight, will be moderate, and a daypack will be adequate for personal gear. Trip members can participate in driving our mini-buses. Our nights will be spent in hostels and small hotels where French cuisine will be a treat and add a delightful ending to our days. Approximate cost: $940.

(625) Backpacking in Sweden, Sarek Park —July-August (12 days). Leader, Blaine LeCheminant, 1857 Via Barrett, San Lorenzo, CA 94580.

The largest wild area in Europe, Sarek National Park, is one of the most representative high mountain regions in Sweden. We will follow the European hiking pattern of huts and hostels and also follow the more rustic format of tents and self-sufficiency used throughout North America. Although major moves will follow the valley contours, opportunities exist for more aggressive hiking. Approximate cost: $760.

(630) East African Wildlife Safari: Walking, Camping, Gameviewing in Kenya and Tanzania—August 2-30. (Optional six-day Walking Trip, Zambia) Coordinator, Betty Osborn, 515 Shasta Way, Mill Valley, CA 94941.

Opportunity still exists to photograph the great herds of game and exotic birdlife found in these countries. In Kenya we explore gamelands with camels in the Northern Frontier, by boat on the Tana River. In Tanzania we travel by landrover to wild areas in Arusha and Ngurdoto Parks. We can photograph game in many famous preserves. Visit prehistoric Olduvai Gorge, Masai villages, ancient ruins. Our guide is a naturalist. Approximate cost: $2695.

(635) Hiking in Czechoslovakia—August. Leader, Dolph B. Amster, P. O. Box 1106, Ridgecrest, CA 93555.

This modest three-week trip will take us to the High Tatras and the Slovak Ore Mountains. Also, we will explore parts of the Kremnica and Giant Mountains as well as the beautiful Obri Dul Valley, a nature preserve. We will assemble in Vienna and return from Prague, using the hostel and hut systems, supplemented on occasion with village accommodations. There will be some time for touring Prague. Approximate cost: $1100.

(640) Hut Hopping in the Austrian and Italian Alps—August 7-20. Leaders, Anneliese and Ken Lass, 712 Taylor Ave., Alameda, CA 94501.

Two contrasting ranges will be covered here, each spectacular in its own way. We will be hiking from hut to hut where we will spend comfortable nights and enjoy the gusto and camaraderie of hikers and climbers, with the food and wine of Europe. This trip is rated moderate and is for hikers in good physical condition. Leader approval required. This trip can easily be combined with trip #642 (Hiking through the Berner Oberland). Approximate cost: $600.

(642) Hiking through the Berner Oberland, Switzerland—August 22-28. Leaders, Anneliese and Ken Lass, 712 Taylor Ave., Alameda, CA 94501.

A seven-day hiking trip through the Berner Oberland, the aristocrat of alpine scenery. We will wander through flowering meadows, forests neat and trim, and villages as if out of a storybook. Mountain vistas unparalleled. Hiking will be moderate to strenuous, accommodations will be at alpine huts and small mountain inns. Leader approval required. This trip can easily be combined with trip #640 (Hut Hopping in the Austrian and Italian Alps). Approximate cost: $505.

(645) West German Federal Republic—On the Weg through the Schwarzwald—August 10-31. Contact, Carl Wood. Leader, Lynne McClellan-Loots, 88 Ridge Rd., Fairfax, CA 94930.

This hiking trip will explore Germany's ancient Black Forest (Der Schwarzwald), famous in legend and song for its enchanting scenery and Swabian traditions. From the forest's northern edge at Baden-Baden, we follow the Westweg (West Trail) 150 miles south through idyllic valleys, medieval villages and steep forested ridges down to the majestic Rhine at Basel. On stopovers in Freundenstadt, Titisee and Freiburg we will observe the farming, conservation and reforestation methods that have preserved this natural area over the centuries. Approximate cost: $1075.

Al Schmitz

(650) Southwest Greenland, Erik's Fjord—August. Leader, Jim Watters, 600 Caldwell Rd., Oakland, CA 94611.

Greenland's coast is green in summer—a tapestry of rock, tundra, flowers, lakes and bays. Our trip is a backpacker's tour that hikes the lonely valleys, takes boats and helicopters over the waterways and treks on a major glacier. The country is ancient, untrod and beautiful. We tent out much of the time, but complement the hiking with Greenlandic hospitality in towns and settlements. The experience will be unique, although with it are the uncertainties of weather and schedules. Approximate cost: $750.

(657) Kenya Cross-Country Horseback Safari—August. Leader, H. Stewart Kimball, 19 Owl Hill Road, Orinda, CA 94563.

This unforgettable adventure on horseback offers the opportunity of riding in the great Rift Valley and through very remote country across Kenya's game-filled plains. You will enjoy the beauty and peacefulness of camping in the bush with only animal sounds to hear. Experience in riding is helpful but not necessary. Some game viewing by landrover in Masai Mara and Samburu game reserves may be included. Our guide is also a naturalist. Approximate cost: 10 persons, $2425; 15 persons, $2000.

(660) Kargil/Zaskar/Manali Trek, Northern India—August 30-September 24. Leader, Wayne Woodruff, Box 614, Livermore, CA 94550.

Beginning in Srinegar, Kashmir, we trek to Ladakh for the start of a two-week trek across the high passes of the Himalaya. Remote villages, monasteries practicing Lamaistic Buddhism, interesting people with colorful and varied lifestyles, and fine views of mountain giants will be seen. The

trek is for the hardy and requires leader approval. Several days of luxuriating on houseboats in Srinegar and sight-seeing in New Delhi are incorporated in the itinerary. Limit is fifteen persons.

(665) Kangarooing in Australia—September. Leader, Ann Dwyer, Box 468, Geyserville, CA 95441.

As a kangaroo moves by leaps and bounds, so shall we (mostly by airplane), as we explore the vast country of Australia. Our first leap is to threatened Fraser Island, all sand, but complete with rain forests and lakes, then on to a few days at the Great Barrier Reef, a long jump to the interior and Alice Springs and Ayers Rock, then a bound to Sydney and Canberra, with more leaps and bounds yet to be told. Approximate cost: $1550.

(670) Japan in the Autumn—September 13-October 13. Leaders, Mildred and Tony Look, 411 Los Ninos Way, Los Altos, CA 94022.

Autumn colors will be touching Japan's mountains as we travel to northern Honshu and Hokkaido by train, boat and bus. The pace provides layovers and opportunities to explore. Itinerary is geared to seeing the countryside where the smaller towns, fishing villages, Japanese inns and onsens are located. Hikers can enjoy day trips on mountain trails while others visit gardens, temples or markets. A Kyoto visit is optional for those who wish to extend their stay in Japan until October 17.

Important Notice!

Reservations for Sierra Club outings are subject to the reservation/cancellation policy and other conditions printed in the 1979 Sierra Club Outing Catalog. Please see page 56 of that issue for this information and a trip application. The deposit for all trips listed in this issue is $100 per person, except trips #300-#436, which require $70 per person deposit. Please include the deposit(s) with your application(s). Trip prices (where listed) are approximate and do not include air fare. Final trip costs for 1980 trips will be published in the January 1980 Outing Catalog. See the November/December issue of SIERRA for a preview of Winter and Spring trips.

For supplemental information on outings, clip this coupon and mail to:
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(by trip number)

Name_____

Address_____

City_____ State_____ Zip_____

Enclosed is $____ for supplements requested over 5 at 50¢ each.

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(675) Japan Alps Backpacking—September 13-October 13. Leader, Dennis Look, 521-½ 15th St., Sacramento, CA 95814.

Japan Alps National Park, with peaks topping 3000 meters, invites backpackers to traverse the crimson-colored ridges and mountain trails which lead to some of the highest country in Japan. Our members will provide their own equipment for the alpine hikes, where we will be joined by members of Japanese mountain clubs. Leader selection gives preference to fifteen members with backpacking experience. Visits to small country towns and some cultural properties of traditional Japan follow the backpack trips.

(565) Sikkim Trekking Adventure, India—October. Coordinator, Doug McClellan, 88 Ridge Rd., Fairfax, CA 94930.

A two-week trek in the high mountains of Sikkim will traverse fine jungle country and also take us to several 12,000-foot passes where the Kanchenjunga massif is dramatically visible. Buddhist monasteries will be visited in out-of-the-way locations. Several days will be spent in Darjeeling. A quick trip to the Sandakphu ridge will be included to witness a view of the entire Himalayan range. Leader approval required. Limit fifteen persons.

(680) Nepal, Jumla to Pokhara—October. Leader, Ginger Harmon, 2850 Washington St., San Francisco, CA 94115.

This lengthy but moderate trek offers a splendid variety of Nepal's countryside, people and architecture. At the midway point, Dhorpatan, you pass through a large Tibetan center, and in the park-like country before Pokhara, you'll meet members of the Gurung and Magar tribes. The highest pass used is Jangla Bhanjyang at 14,600 feet. The use of aircraft to begin the trek furnishes magnificent views of the western giants, Manaslu, Machhapuchhare, Annapurna Himal, and Dhaulagiri. Leader approval required.

(685) Ganesh Himal/Gurka Himal, Nepal—November. Leader, Bob Stout, 10 Barker Ave., Fairfax, CA 94930.

This moderate new trek northwest of Kathmandu combines the best of the favorite Trisule-Gatlang valleys trek with a new route taking you further westward to the feet of Himal Chuli and Manaslu. Because of the barrier of the Himalayan ridges, hill tribes have maintained their unique dress and customs. The maximum elevation reached is 15,000 feet. This is designed as an economy trek where you furnish your personal gear and help with the work of the camp. Leader approval required. Approximate cost: $1075.

(690) Sahara Camel Caravan to the Hoggar Mountains, Southern Algeria—November (3 weeks). Leader, Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611.

The camel caravan will last fourteen days out of Tamanrasset into the mountainous moonscapes of the Ahaggar. You will have your own riding camel. A staff of native Tuaregs will be along to guide and supervise. Camps will be in the sands of dry washes under starry skies. Much simple rock scrambling is possible. Our commissary will be simple and sufficient, but water is always precious. Limit fifteen persons.

(695) Sherpa Christmas—December-January. Leader, Peter Owens, 117 E. Santa Inez, San Mateo, CA 94401.

Spend your holiday trekking in Nepal on this trip designed to coincide with school Christmas holidays. This trip features a moderate twelve-day trek in the Helambu area, the closest Sherpa settlement to Kathmandu. Maximum elevation reached will be 11,000 feet. Optional extensions are available for those with more time. Leader approval required. Approximate cost: $500.

Boat Trips

(300) Tatshenshini River Raft Trip, Alaska—August 24-September 7. Coordinator, Lynn Dyche, 2747 Kring Dr., San Jose, CA 95125.

The Tatshenshini River trip in southeast Alaska is an unparalleled wilderness adventure. Carving its way through the rugged St. Elias Range, the river moves with startling energy through a visual landscape of awesome contrast and dimension. We will float past iridescent-blue glaciers and an unbroken chain of 8000-foot peaks; negotiate a thrilling section of river chocked with enormous icebergs, and see an abundance of wildlife in their natural habitat. There will also be time for day hiking on the glacial moraine. By late August the mosquitoes are gone, and the climate is at its best. The trip begins and ends in Juneau and includes ferry and air transportation within trip dates. Approximate cost: $1045.

(430) Whale-Watching Leisure Boat Trip, West Coast of Baja, Mexico—February 17-24. Leader, Steve Anderson, 1082 Lucot Way, Campbell, CA 95008.

The birthplace of the California gray whales—Magdalena Bay—is also where Canada's game birds make their winter homes. Our home on the sea will be the *Don Jose*, a new and comfortable ship. From it, and in small, quiet skiffs, we will be able to observe these great beasts court, mate, calve and nurse. Passengers, if they wish, will also have a unique opportunity to assist scientists with whale counts and observations. This is a round trip from San Diego to Magdalena Bay, via La Paz. Approximate cost: $790.

(431) River of Ruins (Rio Usumacinta) by Raft—February 20-29. Leader, John Garcia, 124 Romero Circle, Alamo, CA 94507.

The River of Ruins will be our road through the tropical jungle that was the home of Mayan civilization, a botanical paradise filled with iguanas, butterflies, eagles, parrots, toucans and monkeys. All about us will be ruins, some partially restored, others virtually untouched for ten centuries. At night we will hear nothing but the symphony of jungle sounds. Optional: a stay in Mexico City to visit the museum of Mayan treasures. Approximate cost: $895.

(432) Sea of Cortez Leisure Boat Trip, Mexico—March 29-April 5. Leader, Lynn Dyche, 2747 Kring Dr., San Jose, CA 95125.

(436) Sea of Cortez Leisure Boat Trip, Mexico—November 22-29. Leader, % Ruth Dyche, 2747 Kring Dr., San Jose, CA 95125.

These adventures in sea life meet the requirements of both the physically active and the more sedentary. We will explore, savor and photograph this remote natural world of vast sand and shell beaches, expanses of sea, bird-laden mangroves, rich tidepools, sea caves and rock sculptures, losing all sense of time. We will visit exotic islands and observe the abundant sea life. Truly, a unique experience. This trip begins and ends in San Diego. Approximate cost: $800.

Alaska

"Once More Unto the Breach, Dear Friends, Once More"

EDGAR WAYBURN

FOR THE SECOND successive year, the House of Representatives has overwhelmingly passed legislation to protect Alaska's National Interest Lands, once again scoring an impressive victory for the nation's conservation movement. By a vote of 268 to 157, the House chose to vote on the environmentally preferable bill offered by Representatives Morris Udall (D-Arizona) and John B. Anderson (R-Illinois) rather than a rival bill slanted toward more exploitation of the land. The Udall-Anderson bill then passed the full House by a margin of 360 to 65. Major gains in the bill include the following provisions:

- All of the existing Arctic National Wildlife Range and much of the acreage added to it are designated as wilderness, which will protect the calving grounds of the Porcupine caribou herd.
- The two Southeast Alaska national monuments established by President Jimmy Carter—Admiralty Island, the million-acre home of the great brown bear and the American bald eagle; and Misty Fjords, 2.3 million acres of scenic magnificence—are designated as wilderness.
- The Gates of the Arctic is established as an 8.22-million-acre national park, with most of the park designated as wilderness.
- The Yukon Flats, staging area for the fall flight of more than 2 million ducks, is designated a 10.6-million-acre wildlife refuge.
- All parks and refuges are closed to new hardrock mining.

This year's success is the more remarkable because of the resources and strength of the forces opposing the Udall-Anderson bill and the length of time and intensity of effort devoted to defeating this legislation. The winning margin of the vote demonstrates that the American people are aware of the stake they have in the Alaskan wilderness, and that they are determined to keep it protected.

The legislation now goes to the Sen-

Udall-Anderson Bill

Acreage Added to the National Conservation Systems

	millions of acres
National Park System (Includes 1978 national monuments)	
Parks	26.97
Preserves	17.06
Total	44.03
National Wildlife Refuge System (34.3 million acres are reserved federal land being redesignated as refuges—Becharof National Monument, 1.2 million; National Petroleum Reserve-Alaska, 22.5 million; and Yukon Flats National Monument, 10.6 million.)	79.53
National Forest System (Southeast Alaska)	
Tongass additions	1.45
Chugach additions	1.29
Total	2.74
Total Additions	126.30

Acreage Designated as Wilderness

National Park System Wilderness (Includes areas in 1978 national monuments and in pre-1978 National Park System units)	34.04
National Wildlife Refuge System Wilderness (Includes areas already managed by the Fish and Wildlife Service and areas designated as national wildlife refuge units by this legislation)	27.46
National Forest System Wilderness	5.88
Total Wilderness	67.38

Philip Hyde

Moose country on the Yukon River

ate, where it will be considered by Senator Henry M. Jackson's Energy and Natural Resources Committee. The Sierra Club supports the Durkin-Roth-Nelson bill (S. 222), which is in most respects equivalent to the Udall-Anderson bill. Last year, Alaska's Senator Ted Stevens, although not a member of the Energy and Natural Resources Committee, was able to stall the committee in numerous markup sessions and to influence it to report out an inadequate, development-slanted bill. This year Senator Jackson has stated that he intends to bring the bill before his committee at an early date and that he will oppose any additional hearings or any dilatory tactics by other senators. He intends to move the bill out of committee before Congress's August recess.

At this writing, the Senate's action is still unclear. Alaska senators Ted Stevens and Mike Gravel can still put a hold on whatever bill the committee passes—they can keep it from consideration by the full Senate.

However, the situation this year is far different from last year. As a result of the far-sighted and decisive actions of President Carter and Secretary of the Interior Cecil Andrus, 56 million acres of national monuments exist in Alaska, and another 67 million acres, now withdrawn under emergency status for 3 years, are being processed under the 1976 Federal Land Policy and Management Act for management by the Fish and Wildlife Service or the National Park Service for a 20-year period. Should this action become final, the land could be as well-protected as it would be by legislation.

Nevertheless, some kind of legislation must be anticipated. It is necessary to settle the land claims of the state of Alaska, to clarify the status of both subsistence and sport hunting in certain areas of the state, and to complete the selection of lands by the Alaska natives under the Alaska Native Claims Act of 1971.

The efforts of dedicated conservationists both in and outside the Sierra Club have been herculean and successful. As we mount the next stage of the battle, recall the words of Shakespeare's Henry V before the battle of Agincourt:

Once more unto the breach, dear friends, once more; . . .
In peace there's nothing so becomes a man
As modest stillness and humility;
But when the blast of war blows in our ears,
Then imitate the action of the tiger.

Edgar Wayburn chairs the Club's Alaska Task Force and is a past President of the Sierra Club.

Report

Will Commercial Whaling End This Year?

MAXINE McCLOSKEY

SIX YEARS have passed since the International Whaling Commission (IWC) last voted on a moratorium on commercial whaling (majority in favor, but not the required three fourths). Now the United States has placed it on the agenda for the July IWC meeting in London. The federal government responded favorably to an environmental coalition effort that included sending a letter to President Carter asking for the moratorium vote. Twenty-five conservation organizations, including the Sierra Club, signed the letter.

Prospects for the moratorium improved when the Australian government recently embraced the cause of whale protection. Until last December, Australia had been a whaling nation. But after a great public outcry against whaling, the government commissioned in March, 1978, an official Inquiry into Whales and Whaling. A distinguished retired jurist, The Hon. Sir Sydney Frost, was appointed chairman. The report of the inquiry was issued last December; in the words of Prime Minister Fraser, "It is a well-reasoned and comprehensive document."

The exhaustive report concludes with ten recommendations, including: an end to whaling by Australians; a prohibition against all whaling within Australia's 200-mile fishing zone; a ban on the importation of whale products, beginning January 1981; continuation of active membership in the IWC; a world-wide ban on whaling; and promotion of research on whales.

The Australian inquiry is the most significant event in the whale conservation movement since the 1972 United Nations Conference on the Human Environment adopted the ten-year moratorium as "a matter of urgency."

Hopes are high that this will be the year of the moratorium. But the vote requires a three-fourths majority. A number of nations are expected to become new members of the IWC by July 9, when the meeting opens. They include three whaling nations—Chile, Peru and South Korea—and four nonwhaling nations—Ecuador, Monaco, the Seychelles and Sweden. Panama has withdrawn. Thus the membership of the IWC may increase from 17 to 23.

The U.S. and Australian governments are convinced commercial whaling must end. The IWC has amply demonstrated that its five-year attempt to improve management has failed. Whalers are still not even required, as a condition for continued whaling, to gather useful data. As a result we know little more about cetacean populations and their dynamics than in the past. In addition, nonregulated whaling is increasing as more pirate operations start up. The pirates even take protected species, and the IWC is unable to prevent its member nations from buying those illegal products.

We can get along without all the products made from whales. There are substitutes readily available for every one. But there are no substitutes for the living whales. □

Maxine McCloskey is executive director of the Whale Center, in Oakland, California. In 1977 and 1978 she served as advisor to the United States Commissioner to the International Whaling Commission.

At 90, Ryozo Azuma, Honorary Life Member of the Sierra Club, Recalls a Special Meeting With John Muir

Ryozo Azuma, the John Muir of Japan

MAYMIE and WILLIAM KIMES

Gene Rose—Fresno Bee

Ryozo Azuma

IN THE SPRING of 1973, while we were doing research for a bibliography of John Muir's writings, our attention was drawn to a letter by a Mr. Ishigaki to the Muir family, requesting permission to translate Muir's writings into Japanese. A postscript stated: "*Travels in Alaska* was translated and published in Japan in 1942." This was astonishing news, our first inkling that a Japanese translation of Muir's writing existed! Excited, we determined to locate the book, which would certainly be a unique entry for the bibliography. In our search we found that Ryozo Azuma of Tokyo was the author of a current biography of John Muir published in Japanese. Surmising that if anyone would know of the translation, surely he would, we sent our first inquiry to him. We were delighted by his reply: "It is my pleasure to tell you that I loaned my *Travels in Alaska* to a professor at Tokyo University who in turn loaned it to a student, Mr. Taro Tobuse who, inspired immensely by the Alaskan expedition made by John Muir, ventured to translate it into Japanese. It was published by a small publisher in 1942. It would be difficult to find it even in old book stores at the present, although I myself still keep it in my library." So we had stumbled upon a fellow Muir enthusiast in Japan, though we had no idea then how strongly Muir had figured in Ryozo Azuma's life. Our correspondence was to initiate a long and rewarding friendship.

Our first letter from Azuma also revealed that he would be visiting the national parks of Alaska and the West Coast, sponsored by the National Park Association of Japan, and that he would be accompanied by his wife in celebration of their 55th wedding anniversary. Although we had planned an Alaska trip ourselves, we quickly postponed our departure in order to meet this distinguished man when his group arrived in Yosemite, only an hour's distance from our home. In a letter mailed just before Azuma's departure from Tokyo, he wrote, "My heart is already in the wilds of Alaska and Yosemite, dreaming the happy meeting with you who mutually pay a hearty admiration to that great naturalist, John Muir." And indeed it was a happy meeting. With our common interests it seemed as if we had known each other for years.

Ryozo Azuma was a small, wiry man with an alert and energetic manner that belied his 84 years. He recounted some of his mountaineering feats, telling us he had climbed more than 140 peaks in the western part of our continent. He had made nine trips to Alaska and, most amazing of all, in his youth he had known John Muir! The evening was all too short, and we didn't get the complete story of his adventuresome life until two years later, when he and his wife, Tsuya, returned to the United States to visit their daughter, and agreed to be our guests for several days.

One late summer afternoon, as the sun descended behind the pine-crested ridge overlooking our home in the Mariposa foothills, Ryozo enthusiastically related the most important incident of his long

and fruitful life—his meeting John Muir in May 1914. With much feeling, he said, "that thankful opportunity, visiting with him in Martinez, was so poignant and significant that the deep spiritual influence I had from John Muir has dramatically and decisively directed the way for my whole life." At the age of 20, Ryozo had come to Tacoma to attend Puget Sound College, a mission school, having been encouraged to do so by an American professor in Kyoto. Ryozo soon joined some young men of the YMCA who planned to hike all the way around Mount Rainier and to finish their expedition with a climb to its summit. As was customary in an ascent, they spent their first night part way up the mountain in a cave named Camp Muir. Being a curious fellow, Ryozo inquired of their Swiss guide, "Who is Muir, that a camp should be named for him?" The guide had conducted Muir's party to the summit in 1888, and his interest in Muir's achievements was contagious, leading Ryozo subsequently to "read all books of Muir with burning enthusiasm one after another." While he attended college during the following five years, he became an avid mountain climber—this stimulated his fascination not only with Muir's writing, but with Muir himself.

Ryozo related, "It was in the spring of 1914; I ventured to send a letter prudently to Muir, asking him if I could be allowed to visit his homestead at Martinez. Promptly on receipt of a cordial reply from my admiring great man of many years, I took a train in high spirit from Seattle to San Francisco. I was extremely surprised to find a young man from the Sierra Club waiting when the train reached Frisco. I was tremendously moved to know that the kind-hearted Muir had arranged to take me to Martinez easily. After taking wagon ride for about six hours from Oakland with newly found friend, we reached Muir mansion surrounded by rich orchard at twilight. Muir himself soon came out to the porch with familiar heavily whiskered face in smile. I just stood in a daze before my long-revered figure for little while in excess of joyful emotion. Muir stretched his big hand for greeting me, but I simply knelt humbly under him in moving tear, as if having audience by king or pope. Muir was an old man of 75 then; I was only a young fellow of 24. Muir was world-renowned personage, and I was just scanty poor college boy—a great many miles difference between the two as heaven and earth.

"However, Muir seemed taken with certain interest in meeting me, probably because I was first and only Japanese nature-lover ever paid a private call. Although I stayed only two days in Muir mansion, I was exceedingly happy and deeply moved in various ways. I was much excited when he generously permitted me to take a look at his study upstairs where he was busily working on his last manuscript, *Travels in Alaska*. I was amazed in seeing a remarkable landscape painting of Yosemite Valley, also a portrait of Mr. Emerson in frame, and a big-size Bible on his large writing desk. All those dear memories are still fresh in my mind. I never forget, though more than 60 years has elapsed."

National Park Service photo

Ryozo Azuma was honored with a luncheon at John Muir's home, now a National Historic Site, where in 1914 he had met with the Sierra Club's founder.

When we asked Ryozo what happened the next day, he said that a Mr. Hooper came to dinner, the captain of a revenue cutter who was a long-time friend of Muir's from the cruise of the *Corwin*. The Captain expressed concern that he must depart for the Arctic the next day but still had no cabin boy, and Muir promptly remarked, "Take Ryozo! He should see Alaska." This suggestion, so startling at first, culminated in Ryozo's accompanying Captain Hooper to the Arctic. Azuma recalled that the voyage was very difficult, especially crossing the Bering Sea, full of floating ice; however, they finally reached Point Barrow in late July of 1915. Unfortunately they delayed their departure too long; suddenly the vessel was iced in. Captain Hooper kindly arranged for Ryozo to stay at a Presbyterian Mission, where he made the acquaintance of friendly Eskimos. Their language he picked up easily, he confided, since it consisted mainly of names of objects. After he had spent a pleasant winter in the village, the Eskimos invited him to join their hunting party of about 60 men, women and children. He accepted, and they skirted the coast from Point Barrow well into Canada. Azuma recalled that it had been an exciting and inspiring adventure, but a very long and hazardous one that lasted two years and seven months. At the mouth of the MacKenzie River he left the main party with two young Eskimos, and headed into the interior for the Yukon, finally reaching Tacoma in 1919. *The Seattle Post-Intelligencer* published a series of articles on his adventures, appropriately naming him Mr. Eskimo.

Fortune continued to favor Azuma—he found employment with the Japanese government in the promotion of trade between Japan and the western countries, and this official position enabled him not only to visit every state in the U.S., but to make frequent trips to Canada, South America and some European countries.

Finally, in 1934, he was called home to Japan, where he eventually became an adviser to the military on food supply. Sometime before the end of the war, his superior objected to the posters picturing mountains of Canada and the U.S. that always decorated Azuma's office, declaring them traitorous. With angry impatience, and in spite of the remonstrances of his friends, Azuma resigned his job. He then made a decision that was to be a milestone in his life: to devote his time to writing "in the hope to give the people of Japan a true knowledge about America and their cultural life—to show the good and noble side of the American people!" This necessitated his living on savings and on what he could earn from lecturing. Our ambassador of goodwill worked prodigiously, authoring more than two dozen volumes, including *America's Holidays–Their Origin and History, The Story of the States of America* and *The United States Presidents and Their Wives*. He has also written extensively about the national parks and wilderness of Canada and the United States, and their explorers. Azuma has the distinction of being the first person to write about John Muir in Japanese, in a series of articles that appeared in the publication of the National Park Association of Japan. They created so much interest the association commissioned Azuma to write a biography. The result was *The Life of John Muir, Father of Nature Conservation*, published in 1973. By this time, Japanese conservationists as well as leaders of our national parks were identifying him as the John Muir of Japan, not only for his writing, which is invaluable, or for his record

of difficult ascents, which is impressive, but also for the significant direction he has given over the years as adviser to the National Park Association of Japan.

During the last of the Azumas' visits with us, we accompanied them on their sayonara pilgrimage to Yosemite. Park Superintendent Leslie P. Arnberger honored them at a tea to which he invited all his employees, an audience Azuma captivated by relating his experiences with both pathos and humor. The climax of his return to his "second homeland," as he often called it, was his final visit to Muir's "mansion" at the National Historic Site in Martinez. For the occasion, Superintendent Doris Omundson staged a special luncheon with an array of important guests, including three of John Muir's grandchildren. Again, Azuma charmed the guests, relating in touching detail his meeting with Muir and the far-reaching horizons it opened for him.

Immediately upon Azuma's return to Japan, he was asked to attend the Annual General Assembly of Nature Conservation, where he was awarded an "Official Commendation in Acknowledgement of Meritorious Service" by the Agency of Environment, which read: "You have contributed a distinguished service for many years . . . infusing the concept of . . . Nature Conservation by constantly introducing the National Park System of its original Senior Country, the United States."

It was Marshall Kuhn's introduction to Azuma at the luncheon in Martinez that prompted Kuhn (the late founder of the Sierra Club's History Committee) to suggest that the Club honor Muir's remarkable disciple. In 1977, the Club's board of directors presented a life membership to Ryozo Azuma in recognition of his contributions to conservation, especially his book *The Life of John Muir*, stating: "In coming years Japanese and American conservationists will be cooperating on many projects. Your book helps to make possible common ground for this work." We can all be grateful that Azuma not only met John Muir, but caught his vision and transmitted his legacy to Japan. In honoring Ryozo Azuma, the Sierra Club indeed brings international honor to its members! □

Maymie and William Kimes are authors of John Muir, A Reading Bibliography *(William P. Wreden, 1977). They have spent more than 30 years following Muir's travels in Europe, South America, Wisconsin, Alaska and the Sierra Nevada.*

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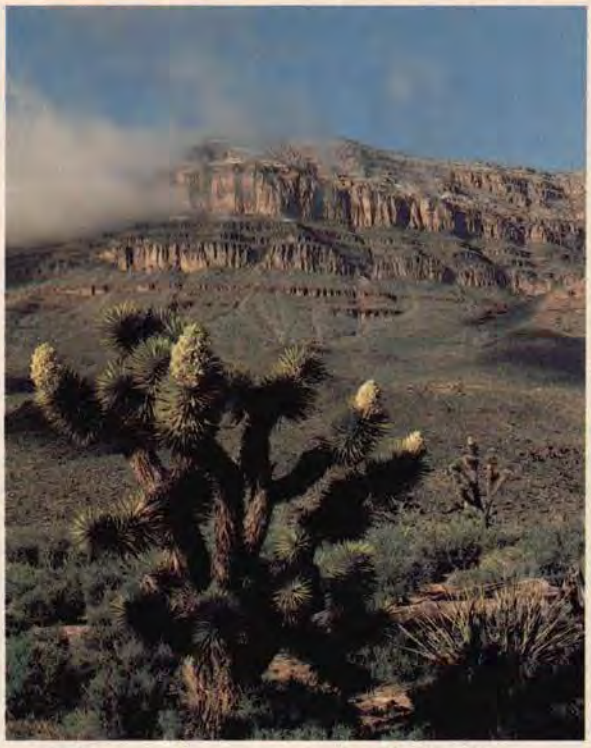
Why Go Into the Desert?

EDWARD ABBEY

Why go into the desert? That sun, roaring at you all day long. The fetid tepid vapid little waterholes slowly evaporating—full of cannibal beetles, spotted toads, hairworms, liver flukes—and down at the bottom, invariably, the pale drowned cadaver of a ten-inch centipede. Those pink rattlesnakes down in The Canyon, those diamondback monsters thick as a catskinner's wrist that lurk in shady places along the trail, those unpleasant solpugids and unnecessary Jerusalem crickets that scurry on dirty feet across your face at night. Why? The rain that comes down like lead shot and wrecks the trail before you, those sudden rockfalls of obscure origin that crash like thunder ten feet behind you in the heart of a dead-still afternoon. Why? The ubiquitous vultures, so patient—but only *so* patient. The ragweed, the tumbleweed, the Jimsonweed, the snakeweed. The scorpion in your shoe at dawn. The dreary wind that seldom stops, the manic-depressive mesquite trees waving their arms at you on moonlight nights. Sand in the soup du jour. Halazone tablets in your canteen. The barren hills that always go up, which is bad, or down, which is worse.



Jerry Sieve

Joshua trees near Arizona's Grand Wash Cliffs.

Why go to Starvation Creek, Poverty Knoll, Buzzard Gulch, Wolf Hole, Bitter Springs, Last Chance Canyon, Dungeon Canyon, Whipsaw Flat, Dead Horse Point, Scorpion Flat, Dead Man Draw, Stinking Spring, Camino del Diablo, Hell Hole Canyon, Jornado del Muerto . . . Death Valley? I think of a home-made sign I once saw at a fork in a rocky road somewhere in the boondocks of western Texas: "Hartung's Road—Take the Other."

A good sign. One would have liked to meet Mr. Hartung. But I didn't. I respected his need for privacy. I share that need—as who doesn't these days?

Well then, why indeed go walking into the desert when you could be strolling along the golden beaches of California or camping by a stream of pure Rocky Mountain spring water in colorful Colorado or loafing through a laurel slick in the high blue misty hills of North Carolina?

Sometime ago a friend and I took a walk around the base of a mountain up in Coconino County, Arizona. About halfway around this mountain, on the third or fourth day, we paused for a while—two days—by the side of a stream which the Navajos call Nasja, perhaps because of the strange amber color of the water. (Caused by juniper roots—the water seemed safe enough to drink.) On our second day there I walked down the stream, alone, to look at the canyon beyond. I entered the canyon and followed it for half the day, three or four miles maybe, until it became a gorge so deep, narrow and dark, full of water and the inevitable quagmires of quicksand, that I turned around and looked for a way out. A way different than the way I'd come, which was crooked and uncomfortable and buried. I wanted to see what was up on top of this world. I found a sort of chimney flue on the east wall, which looked feasible, and sweated and cursed my way up through that for an unreasonable distance until I reached a point where one could walk upright, like a human being. Another 300 feet of scrambling brought me to the rim. No one, I felt certain, had ever left Nasja Canyon by *that* route before.

But someone had. I found near the summit an arrow sign, three feet long, formed of stones and pointing off into the north, toward those same old purple vistas, so grand, immense and mysterious, of more canyons, mesas and plateaus, more mountains, more cloud-dappled sun-spangled leagues of desert sand and rock, under the same old, same true, wide and aching sky.

The arrow pointed "into" the north. But what was it pointing at? I looked at the sign closely and saw that those dark, desert-varnished stones had been in place for a long, long time; they rested in compacted dust. I followed the direction suggested and came promptly, within a hundred yards, to the rim of another canyon and a drop-off straight down of a good 500 feet. Not that way, surely. Across this canyon was nothing of any unusual interest that I could see—only more of the familiar sunblasted sandstone, a few scrubby clumps of blackbrush and prickly pear, a few acres of nothing where only a lizard could graze surrounded by a few square miles of more nothingness of interest chiefly to horned toads. I returned to the arrow and checked again, this time with field glasses, looking away toward the north for 10, 20, 40 miles into the distance. I studied the scene with care, looking for an ancient Indian ruin, a significant cairn, perhaps an abandoned mine, a hidden treasure, the mother of all mother lodes . . .

But there was nothing out there. Nothing at all. Nothing but the desert. Nothing but the world.

That's why. □

Edward Abbey's books include Desert Solitaire *(Ballantine, 1977),* Slickrock: The Endangered Canyons of the Southwest *(Sierra Club, 1974) and, most recently,* Abbey's Road *(Dutton, 1979). This excerpt is the foreword to* The Deserts of the Southwest, *by Peggy Larson, Sierra Club Books, 1977.*

What Are They? Where Do They Come From?
What Will We Ever Do With Them?

Nuclear Wastes

ELLEN WINCHESTER

FOR MANY determined proponents of nuclear power, finding a solution to the nuclear-waste problem has become the bottom line. Even after Harrisburg, they have faith that reactors can be made safe, if only the nuclear industry will shape up and follow the advice of experts. But without a solution for the waste-disposal dilemma, legions of smoothly running reactors will only compound the problem. Radioactive wastes from commercial and military production are already more abundant than all the water in the world's oceans could dilute without risking dangerous reconcentrations of radioactivity in marine organisms and sediments.

The tragic limit over which human hubris may have tripped is that nuclear waste stays poisonous practically forever; nobody has yet invented a container for it that won't leak, sooner or later. Environmental concern about radioactive waste has focused on four areas: the difficulty of containment, the different kinds of radiation, different forms of existing waste and the locations of radioactive waste.

For more than 35 years nuclear promoters have been saying that safely isolating nuclear wastes would be easy. Until very recently they were saying it would be so easy that it wasn't necessary to bother with yet. But even before the valve failed in the Three Mile Island plant's cooling system, nuclear engineers were becoming less confident about their ability to contain ionizing radiation under any and all conditions.

In mid-March the federal government's Interagency Review Group (IRG) on nuclear-waste management reported to the President that the scientific feasibility of government's and industry's favorite waste-disposal concept, dry storage in geologic repositories constructed deep in salt beds or hard rock, "remains to be established." This admission, though pitched in a low key, strikingly contrasts with an earlier draft's optimism about the feasibility of geologic storage for thousands of years. The final report, produced by representatives of fourteen federal agencies, further advised the President, who is expected to make the key decision on geologic storage before this article is published, that "the preferred approach to long-term nuclear-waste disposal may prove difficult to implement in practice and may involve residual risks for future generations which may be significant." The report stressed that the safety of disposing of high-level wastes in mined repositories could only be assessed by specific investigation at particular sites.

So far, only a few potential waste-repository sites have been subjected to rigorous geologic investigation: bedded salt deposits near Lyons, Kansas; granite formations in Sweden; and salt beds near Carlsbad, New Mexico (the Waste Isolation Pilot Plant, WIPP). The Kansas salt beds were found to be riddled with holes from commercial exploratory operations. In February, geologists advising the Swedish Nuclear Power Inspectorate gave a failing grade to a proposed storage site in granite. Geologists have raised basic questions about the safety of storing radioactive waste in *any* salt formations. The WIPP site, the most thoroughly studied by the United States Department of Energy (DOE), is currently the focus of heavy criticism from environmental scientists as well as from government nuclear scientists outside the DOE. (See accompanying article, "Why Salt Is the Wrong Medium for a Waste Repository.")

So far, all the design concepts for geologic repositories plan for what at best amounts to slow leaks and *not* for zero discharge of radioactive wastes. But this is not enough. A scientific consensus appears to be forming that *any* amount of radiation can cause cancer in man.

An unverifiable amount of cell damage is caused by already existing "background radiation" from cosmic rays, from emanations of the natural uranium and thorium in the earth's crust, and from residual radiation from certain natural elements in granite and other rock. Estimates of this natural radiation range from 100 to 250 millirem per person a year for whole-body doses. Since the average medical and dental exposure is 70 millirem annually, human exposure can quickly multiply above the natural background level with no increase from nuclear power or weaponry. Even a transcontinental airplane flight adds four millirem to the body's burden of exposure.

As more research is published on how much radiation is "safe" for human beings, scientists learn more about how unsafe even tiny increases above the background level can be. With no control possible, the damage done by the latter cannot be measured. Even lung cancer induced by tobacco smoking may be traced to the effect of particles of polonium, a radioactive element collected from the air by tobacco leaves and deposited in the lungs of smokers.

Different kinds of ionizing radiation—labelled alpha, beta, gamma and neutron—pose different hazards to living cells. Alpha-emitters such as polonium and fissile plutonium 239 can

It seems evident that the release of carcinogens into air, water or the food chain should be reduced rather than permitted to escalate over time.

be transported in any kind of sealed container, even pockets or briefcases, without harming anyone because alpha particles can travel only short distances and cannot pass through the protective outer layer of human skin. But if an alpha particle is inhaled into the lungs, or otherwise given a chance to reach internal organs, it adheres where it is deposited and damages cells by accumulated radiation over the years. As little as 10-100 micrograms of plutonium 239 in the lung is probably enough to produce a 50% chance of inducing lung cancer. Reactor-grade plutonium is so highly refined that one tenth as much will do the same.

Alpha-emitting elements have very long half-lives; they include most of the actinides: actinium, thorium, protactinium, uranium, neptunium, plutonium, americium, curium and heavier elements, many isotopes of which are fissile. (Transuranic elements, a classification often used in the media, are actinides heavier than uranium.)

Beta particles, more than 7000 times lighter than alpha particles, can travel farther and penetrate skin more easily. Nevertheless, like alphas, they are most dangerous absorbed inside the body. Most products of nuclear fission, like those that threatened the countryside around the Three Mile Island reactor in March, emit beta radiation. Two that have received much attention are iodine 131, which concentrates in the thyroid gland, and strontium 90, particularly dangerous for infants and children because it is most readily absorbed by bone. Another beta-emitter, tritium, is a radioactive form of hydrogen that, as a constituent of water, spreads easily in the body and is therefore more easily diluted and less toxic. Radioactive krypton, routinely released from reactors, diffuses through the atmosphere and adds to the average total external dose of low-level radiation received by the public.

Most fission products also emit gamma rays. Like the neutrons produced by nuclear fission and fusion, gammas penetrate through skin, sinew and bone—as well as through heavy lead, steel and concrete shielding. X-rays are a lower-energy form of electromagnetic radiation, similar to gamma rays, that can penetrate the body and can also cause biological damage. Doctors and dentists are now encouraged to keep X-rays to a minimum.

New information is released almost daily concerning the heightened cancer incidence among workers exposed to low-level radiation in uranium mining and milling, military reprocessing (which recovers uranium fuel used in nuclear-powered ships and plutonium for bomb fabrication), nuclear shipyards, soldiers involved in nuclear-bomb testing and civilians caught in its downwind fallout. Recently Ralph Nader's Health Research Group asked President Carter to act on a National Academy of Sciences recommendation that allowable occupational exposure to low-level radiation be reduced ten fold, from 5 rem to 0.5 rem per year, the equivalent of 20 to 50 times the level of exposure of a chest X-ray.

The Nader group cited a British study that showed increased chromosomal damage in workers exposed to only 2 to 3 rem a year. Dr. Alice Stewart of the University of Birmingham, who has been working with a study of 35,000 living Hanford workers, says that prolonged low-dose exposure leads to proportionately more damage than a single, larger dose. At lower doses, the body is able to repair slightly damaged cells well enough for them to reproduce, passing on the damage to succeeding generations, or to make other damaged cells that weaken the body's resistance to disease and injury. Children born in southern Utah during the years when atomic bombs were exploded above ground have been reported by a University of Utah medical team to suffer 2.5 times the number of leukemia deaths as children born before and after the testing.

For 22 years the accepted wisdom has been that annual exposure of 170 millirem above background radiation levels was a permissible level for the general population. However, in 1977 the Environmental Protection Agency suggested 25 millirem as the annual limit. The Nuclear Regulatory Commission (NRC) has adopted that figure as the permissible dose to the public created by the nuclear fuel cycle.

Meanwhile cancer mortality is on the rise in the United States among all age groups. Chemical air and water pollution, food additives and increased ionizing radiation from bomb-test fallout, medical procedures and nuclear reactor operation all appear to be culprits, each synergistically augmenting the carcinogenic effect of the others. Given this knowledge, it seems evident that the release of carcinogens into air, water or the food chain should be reduced rather than permitted to escalate over time—as ionizing radiation from increasing quantities of badly stored wastes is all too likely to do. (The radioactivity of commercial waste began to exceed that of military waste last year).

Mill Tailings

THE problem of containing radiation from nuclear wastes begins at the uranium mine and at its adjacent mill, where uranium-bearing rock is crushed and processed and tailings are chemically separated from uranium. Currently 16 uranium mills in the United States process 10 million to 15 million tons of ore annually. Good ore contains 0.2% uranium by volume. The rest is tailings; about 140 million tons have accumulated so far in the United States, almost uranium-free—but not radiation-free. Uranium, decaying through the ages, has produced thorium and thorium's "daughter" radioactive elements, including radium and radon, which are sources of gamma radiation.

Because of thorium 230's long half-life (180,000 years), its daughter products will remain active pollutants for hundreds of thousands of years. Not until fifteen years ago, when alert public-health personnel discovered a higher incidence of cancer in people who lived in houses built with or on mill tailings, was their use in the construction industry and for road-building in the West curtailed. But the problem with mill tailings persists; tailing dumps cover many acres of ground. Wind whips the tailing dust high into the atmosphere, where it is carried for long distances.

Covering existing tailings with asphalt or burying them and safely sequestering new tailings is an expensive project the Department of Energy's Nuclear-Waste Management Program is

The fact that radioactive particles can travel through the air has been widely known since Hiroshima. What is less widely known is that nuclear reactors routinely vent into the air small amounts of gaseous radioactivity.

currently working on. The progress of its efforts to protect the atmosphere from radon, and groundwater from leached radium, will need continued public attention.

As part of its study of nuclear waste, the IRG postulated several energy futures for the nation—different estimates of energy use that would result in varying amounts of nuclear waste. Under IRG's "Case 1" postulate of 148 gigawatts (GW) of installed nuclear electric generating capacity in the year 2000 (the higher Case 2 scenario projects 380 gigawatts—today the U.S. has about 50 GW of nuclear capacity), 1.9 billion tons of tailings will have been produced by then. Legislation is before Congress that would authorize EPA to issue standards and criteria for mill-tailings disposal, and would establish the Nuclear Regulatory Commission's (NRC) licensing authority over active sites and DOE's authority over inactive sites. Assigning authority, however, cannot guarantee a solution of the gargantuan problem posed by the tailings.

Low-Level Wastes (LLW)

NEXT to mill tailings, low-level wastes, which contain small amounts of radioactivity and require no shielding, produce the largest physical mass of "nuclear junk" to be disposed of. They start accumulating at the mine shaft. Used equipment and such miscellaneous debris as gas filters, lab coats, paper towels and some liquid wastes solidified in concrete continue to accumulate through the entire fuel cycle. Some of it—trucks, parts of decommissioned reactors—is very bulky.

During most of the history of military and commercial use of the atom, low-level wastes have been buried in shallow trenches. A few years ago at the burial site at Maxey Flats, Kentucky, plutonium was found to have migrated as far as two miles from the site. Of six burial sites for commercial wastes, two (West Valley, New York, and Maxey Flats) are now closed. A third site, at Sheffield, Illinois, is already filled to its licensed capacity. The NRC had to order the Sheffield operator to continue patrolling fences and maintaining trenches after the site had been, in effect, abandoned.

Currently, commercial LLW is buried at Barnwell, South Carolina (where the state government limits quantities), at Beatty, Nevada, and at Hanford, Washington. The DOE has fourteen other burial grounds. No coordinated national program for LLW management exists yet. Niagara Mohawk Utility has applied for a permit to build a commercial LLW incinerator at a reactor near Oswego, New York, but the local Sierra Club is worried that scrubbers won't keep radioactive cobalt and cesium out of the air.

The DOE has selected a contractor to build an incinerator at the Idaho National Engineering Laboratory. Intended for operation by late 1986, the incinerator will take eight years to process the existing backlog of LLW. The rock-like radioactive slag residue will go to . . . wherever the government may decide to build a permanent waste repository.

Almost all low-level wastes are either solids or made solid with concrete, but some low-level liquid wastes at a DOE facility at the test site near Mercury, Nevada, are pumped 1000 feet down into an underground cavity created by a nuclear explosion. Unknown quantities of low-level liquids were solidified in cement and dumped at sea in the early days of nuclear development. It is worth asking whether the Nevada test-site disposal of liquid wastes could pass the skeptical scrutiny geologists, geochemists and hydrologists are currently giving to concepts for using geologic formations to isolate spent fuel and high-level wastes encased in steel and titanium.

Intermediate Waste Liquids

INTERMEDIATE-LEVEL waste liquids produced at the Oak Ridge National Laboratory are injected into a deep underground shale bed after first being mixed with grout. The grout solidifies and is intended to fix the wastes in place. Whether it does or not, over the very long periods that some of the waste remains radioactive, will remain in question for many thousands of years.

Transuranic (TRU) Wastes

SINCE both TRU waste (which contains more than ten nanocuries of transuranic activity per gram) and high-level waste contain long-lived actinides, they pose similar long-term containment problems and should be disposed of with equal care. Yet all existing commercial TRU waste is buried, along with much larger volumes of associated materials, in shallow trenches at commercial burial sites (except at Barnwell, where the government of South Carolina ruled against it). Only Hanford continues to receive commercial TRU waste for burial.

The transuranic content of the DOE's TRU waste is mainly plutonium. Until recently most of it was buried, but several years ago, at Hanford, enough plutonium was found to have migrated from one burial trench to make a chain reaction possible. As a result, since 1970 DOE has stored TRU waste in a retrievable form. The major purpose of the proposed WIPP disposal site is to store DOE TRU waste produced at Rocky Flats in the fabrication of bombs and currently stored at the Idaho National Engineering Laboratory. The state of Idaho has repeatedly pressured DOE to remove this waste.

Airborne Emissions

THE fact that radioactive particles can travel through the air has been widely known since Hiroshima. It became more immediately apparent at Three Mile Island. What is less widely known is that nuclear reactors routinely vent into the air small amounts of gaseous radioactivity, including the nuclides krypton 85, xenon 133, iodine 131 and carbon 14. To reduce air pollution as much as possible, airborne emissions from reactors, spent-fuel storage, fuel reprocessing, weapon-related activities and waste treatment processes such as incineration and vitrification are filtered through sand, fiberglass and other appropriate materials that themselves then become radioactive wastes.

A supposedly typical DOE chart of a filtration system in a spent-fuel reprocessing facility claims 99.97% efficiency before the gases go up a 200-foot stack. Emissions of radio-iodine are controlled by special absorbers. The DOE Nuclear Waste Management Program aims to develop "new capability in

Approximately 73 million gallons of liquid high-level wastes, among the most toxic and hazardous substances known, are now on hand awaiting a permanent method of disposal.

areas where more restrictive standards seem likely to apply in the future." It seems a virtuous intention.

High-Level Wastes (HLW)

HIGH-LEVEL wastes are either spent-fuel assemblies or the fission products and actinides that remain in spent fuel after plutonium and uranium have been recovered in reprocessing. Approximately 73 million gallons of liquid high-level wastes, among the most toxic and hazardous substances known, are now on hand awaiting a permanent method of disposal. They are in various forms: extremely corrosive acid liquids; salt cakes; sludge in underground tanks; and granular, calcined solids stored in underground bins. They consist of fission products, including strontium 90 and cesium 137 (30-year half-lives), actinides and certain other radioisotopes. The relatively short lifetimes of the fission products produce rapid disintegration; most of the wastes' heat and radiation are dissipated within 600 years of their existence. But the slower-disintegrating actinides may persist for millions of years.

Originally, HLWs are liquids produced during the reprocessing of defense-program reactor fuel or the commercial reprocessing of spent fuel. Since the United States' only commercial reprocessing plant, owned by Nuclear Fuel Services and located in West Valley, New York, has been closed, high-level wastes are now produced only at DOE military facilities in Savannah River, South Carolina; Richmond, Washington; and Idaho Falls, Idaho.

New double-shell steel tanks are being constructed to replace leaking tanks at the Hanford Nuclear Reservation and to provide additional interim storage. High-heat-generating cesium 137 and strontium 90 are being isolated from other wastes and encapsulated separately to make handling the remaining wastes easier.

Problems other than leakage have arisen with high-level waste storage. Waste at West Valley neutralized with an alkaline solution has turned out to be very difficult if not impossible to remove from a carbon steel tank. After a dispute arose between the state of New York and the federal government over who was financially responsible for 600,000 gallons of waste and for the cost of dismantling the Nuclear Fuel Services plant at West Valley, both parties arrived at a tentative agreement that has been rejected by environmental groups. Under the agreement, DOE would accept major financial responsibility for West Valley and would use its spent-fuel pool to store up to 1000 tons of spent fuel, and its waste-burial grounds would be reopened. Environmental groups, including the Sierra Club's Nuclear Waste Task Force, can be expected to mount an effective campaign against any new scheme to encourage the ac-

cumulation of nuclear waste by storing it at West Valley while means for its disposal remain unknown.

Since the United States has deferred indefinitely reprocessing of commercial spent fuel, owing to concern over keeping plutonium out of the hands of hostile military powers or terrorists, commercial facilities for glassifying—vitrifying—wastes have not been developed here, as they have been at France's Cogema plant and soon will be at Britain's Windscale plant. Both plants, and the nations planning to use their reprocessing facilities, are counting on the development of geologic storage for these vitrified wastes.

Reprocessing contracts such as Cogema's promise to remove all but 0.5% of the plutonium from wastes, but experts view the promise as optimistic. Moreover, approximately three times as much americium is also left in the wastes; it decays into plutonium, so the plutonium content actually increases over the first 20,000 years. All of the other actinides and fission products are left in the reprocessed waste product. If recovered plutonium is used as fuel and is again cycled through more reprocessing, it will be added to successive waste streams to accumulate wherever the waste is stored, a fact generally overlooked by the proponents of "burning up" the actinides.

Spent Fuel

NUCLEAR reactor fuel rods, each about twelve feet long, consist of a packing of uranium-oxide fuel pellets and a zircaloy casing, called "cladding." Approximately 40,000 of them are arranged in assemblies for encasement in the core of a large reactor. After about three years of fission, radioactive by-products slow down the fuel pellets' ability to sustain a nuclear reaction; the whole assembly is then considered "spent" and removed to a water tank for cooling and storage. Each year a 1000-MW light-water reactor discharges about 25.4 metric tons of spent fuel into storage pools adjacent to the reactors. Only one storage pool in the United States, operated by General Electric at Morris, Illinois (originally intended to store spent fuel for reprocessing), has accepted spent fuel from distant reactors, some 300 tons of it.

The storage pools at first were intended to store spent-fuel rods for five years, but since no alternative system of storage has been devised, some spent fuel from our oldest commercial reactors has been cooling in them for 20 years. The spent-fuel rods must be carefully separated from each other to prevent the start of a chain reaction in the pool. The rods grow brittle with age; their cladding weakens; their cooling water is vulnerable to cutoff; they contain higher levels of radioactive strontium and cesium than the reactor itself; and no one in his right mind considers permanent storage in a pool a good idea, whether at the generating plant or in a very large, centralized, "away from reactor" pool. Unfortunately no one has yet developed and demonstrated a better plan.

Meanwhile, nuclear engineers have designed methods for increasing the load in existing storage pools by reracking; and some NRC spokesmen believe that the United States could continue existing and planned reactor operation with no storage other than the pools until the end of the century. According to the IRG, the U.S. has about 5000 metric tons of spent fuel now, with at least 71,000 tons anticipated by the end of the century.

From the point of view of the nuclear industry, all spent fuel is an energy resource that should be kept available for reprocessing into plutonium and uranium to be refabricated into nuclear fuel. Nuclear critics worry about keeping spent fuel cool and containing its radiation while adequate permanent isolation technologies are developed.

Why Salt Is the Wrong Me

THE United States Department of Energy has proposed placing radioactive wastes 1000 feet below ground in a salt formation in the Finger Lakes region of New York State. The underground area of the waste repository would be 2000 acres and would hold 66,000 to 106,000 tons of radioactive waste. Spent fuel from operating U.S. and some foreign nuclear reactors would be trucked to and through New York state to be buried in upstate New York. The amount of radioactivity is truly prodigious (assuming a five-year decay period, 11 billion to 18 billion curies of cesium and strontium), corresponding to the potential of trillions of bone, muscle and thyroid cancers and genetic effects for future generations. These wastes will stay toxic and pose a threat to New York state for millions of years.

Salt should not be considered the preferred medium. Salt is extremely water-soluble, is highly corrosive and cannot hold the radionuclides effectively. When salt is heated, water is attracted to heat sources, such as canisters of radioactive waste. Water moving through the salt becomes brine. As this brine reaches the radioactive waste materials, the glass or ceramic waste forms will eventually break down, and the radioactive materials will leach out. It has only recently been recognized that this leaching can occur within months rather than thousands of years, as had been previously assumed.

Salt often occurs near valuable mineral deposits; e.g., potash near the WIPP facility in southwestern New Mexico, natural gas in the Louisiana Salt Domes and the Finger Lakes region of upstate New York. Extensive drilling has taken place in these formations in the past; there are numerous uncapped and recorded wells in upstate New York. All drill holes are avenues for both surface and underground water to enter the salt formation. Even if all the drill holes could be located, which is problematical, the technology for plugging the holes to prevent water intrusion over the time periods required, millions of years, is not available.

Drilling is likely to occur in the future in any region with valuable resources. Location of a repository in such a geological medium would be contrary to the proposed EPA criteria on radioactive waste which state that "institutional controls should not be relied on for greater than 100 years." Without institutional controls, such as fences and guards, drilling could occur near any salt formation in the future just as it has in the past.

If water were to enter a salt repository (through shafts, bore holes or other means), the integrity of the salt formation would be undermined. Salt is highly soluble compared to other materials such as granite. Further, scientists have a limited ability to predict future changes in climate, groundwater flow regimes and possible accidental flooding. For example, according to the EPA, in a proposed salt repository in Lyons, Kansas, "considerable volumes of water migrated in an unpredicted manner . . . as a consequence of dissolution of salt by groundwater seeping into the repository. Seepage was along an abandoned drill hole that, like most, had not been cased and plugged. This puts a premium on picking a site where precise locations of all abandoned drill holes or old underground workings are known."

Until it is known how to plug such drill holes, the act of exploratory drilling itself, in order to determine the extent of the salt formation, may be sufficient to render a repository

...um for a Waste Repository

useless for high-level waste burial.

Salt crystals themselves also contain significant amounts of water in brine pockets and along intergranular boundaries. According to the EPA, the volume of water contained may equal more than 1% of the salt.

The temperature within the repository may reach 300°C. Water, in the form of liquid and vapor, is drawn *towards* the heat source in a salt repository, as opposed to other geologic media where water moves away from the heat source. This hot brine solution is acidic and very corrosive. According to the EPA, the canisters would be breached in a decade or less. Under these conditions, only the geologic medium itself can be relied on to contain waste longer than a decade. Surprisingly, no corrosion tests have yet been undertaken of containers exposed for decades to salt solutions, at temperatures up to 300°C.

Two high-level waste forms, spent fuel or the high-level waste from reprocessing, would be placed within a geologic repository. If spent fuel is reprocessed, the favored waste form would be glass. In the presence of steam, salt and acid, the glass would "deteriorate rather completely . . . in a matter of days," according to the National Academy of Sciences. Little research has been devoted to spent fuel within a salt formation, under the temperature and pressure conditions that would exist in a salt repository. The exact chemical composition of spent fuel and the type of container have not yet been defined. Studies of leachability and interaction between spent fuel and salt have not been carried out.

Once the containment is breached and the radioactive materials leach into the salt formation, the salt itself will not "fix" the radionuclides. This is a major disadvantage of salt. This is to be contrasted with shale and other formations where waste material would attach itself to the geologic medium.

Increased temperatures and the presence of brine would undermine the structural integrity of the salt repository. According to the U.S. Geological Survey, "Increased temperatures in salt would further decrease mechanical strength of the salt-brine mixture and would increase the creep rate of dry salt."

The movement of hot salt means that it would make it almost impossible to keep the repository open for extended periods of time. According to the EPA, it is unlikely that spent fuel rods could be safely recovered from a salt repository "more than a few tens of years after emplacement and backfilling, for by then the salt would have completely sealed the openings."

As the salt is heated and becomes more plastic, canisters would begin to sink as they corroded and leached. They would also move laterally, toward the center of the repository, where the temperatures are higher. As the canisters moved toward each other, the center would become still hotter and the salt more plastic. As the salt became more plastic, the structural integrity of the repository would be further reduced. Most salt formations overlie permeable limestone formations; the canisters would move toward the limestone where they could enter the groundwater.

For more information, contact the Sierra Club Radioactive Waste Campaign, Box 64, Station G, Buffalo, New York 14213.

Decontamination and Decommissioning

ALL operating nuclear reactors and all nuclear-fuel processing facilities, including buildings, will sooner or later become nuclear wastes. Nuclear reactors themselves have an expected operating life of 30 to 35 years. The DOE has identified 560 nuclear facilities currently obsolete or expected to become obsolete in a few years. Nobody really knows how they will be decommissioned—if they can be—or how much it would cost. Estimates of decommissioning costs are not included in the rates of utilities using nuclear power. Closing obsolete facilities and guarding them forever—"mothballing"—has been suggested. So has encasing them in concrete. Neither idea sounds like a winner.

Dismantling the reactors is probably the only option that will be acceptable to environmentalists, but it does not answer the question of where and how the chopped-up reactor will be contained. The NRC's Peter B. Erickson is quoted in *Business Week* as saying that any mothballing plan must take into consideration an entire range of elements, including short-lived isotopes such as cobalt 60, dangerously radioactive for 100 years, and such long-lived substances as niobium 94 and nickel 59, with half-lives of 20,000 and 80,000 years, respectively, that require isolation for at least a half-million years.

Nuclear reactors looming through the mist on hillsides or the coastal horizon look as sturdy (and as eerie) as Stonehenge; 72 commercial reactors were operating in the United States at the time of the Harrisburg accident, with over 500 operating or in the planning stages worldwide. Like the other nuclear wastes, they won't go away by themselves.

The two plans for intermediate and permanent storage of high-level wastes or spent fuel have received considerable attention: the Swedish plan for storage in granite and the WIPP site in salt. They aim, at best, for 100 years of absolute containment by multiple barriers of casks, clay and rock or salt. During that time some fission products would decay to very low levels, but long-lived materials, the heavy-metal actinides capable of fission themselves, will probably slowly leach through corroded casings and dissolved glasses, through fissures in rock and underground aquifers into rivers and waterways. Eventually they will reach the oceans.

DOE is considering another plan to emplace nuclear wastes in clays on the sea floor far from any continental boundary. In case of a failure of containment, radioactive pollutants could reach the oceans even sooner.

The gamble with any plan yet proposed for storage of nuclear wastes is (1) that none of our descendants will breach the repositories through war or drilling for minerals; (2) that water and heat will not concentrate fissile materials to form inadvertent nuclear reactors capable of producing larger quantities of unconfined radioactivity; (3) that ice sheets, the geologic folding of the earth, or other unforeseen processes will not uncover the wastes; and (4) that none of the anticipated processes will happen faster than expected, causing the wastes to "bubble up through the earth two decades from now because in 1979 we made a wrong technical decision," as Senator Glenn worried aloud at a hearing on the IRG recommendations. It is a most unusual gamble; no one now alive is expected to lose, if all goes according to plan—unless a sense of guilt over endangering the future for our present comfort and convenience is a kind of loss.

A thousand years ago, the finest architectural and engineering talents in the western world were mobilized to build cathedrals. It is ironic and disheartening that comparable talents and even more sophisticated skills must today be devoted to devising foolproof garbage dumps. □

Controversy Over th

Above: *TopaTopa, the sole condor in captivity (so far), in his enclosure at the Los Angeles Zoo.*

Below from left: *a rare photo of a soaring condor; a wild condor perches at treetop near the Sespe Sanctuary; a closeup of Topa.*

Photographs by Ted Schiffman

e California Condor

JEFFREY S. HUDSON

THE CALIFORNIA CONDOR—the largest and rarest of North American birds—is now at the center of one of the hottest wildlife controversies in years. Everyone agrees about one thing—the condor is in deep trouble. There are probably fewer than 30 birds left, soaring over the dry, mountainous country north of Los Angeles. The problem is deciding what should be done to help the condor. The U.S. Fish and Wildlife Service is pushing a program that involves the trapping and captive breeding of condors.

It is this government plan that has sparked intense controversy. Though supported by some conservation organizations and by prominent biologists, it has also encountered considerable opposition from many conservationists and biologists, who argue that the condor might still survive in the wild with some careful assistance. And they worry that the government program might backfire, injuring wild condors and producing young birds that would have difficulty adapting to the wild. Some oppose the program simply because they feel that the condor—as an embodiment of wildness—should not be caged or confined.

It is a difficult and emotional issue, and one that cuts across the conservation community. The questions about the program are deep, and the answers aren't easy. Will the program produce self-sustaining condors, or will it hasten the disappearance of the species in the wild? Humans have unquestionably placed the condor in its present predicament—by capturing condors for breeding in captivity are we behaving responsibly, saving a species that might otherwise become extinct? Or are we merely compounding past errors, in effect admitting that we cannot leave room for both ourselves and the condor, and can only hope to save the birds by placing them under our direct control?

To understand the present controversy, it is important to understand both the bird and its past. The California condor is a scavenger and does not kill. Despite its 9-foot wingspan, it weighs only a little more than 20 pounds. It lives for 20 to 40 years and does not mature until 8 years of age. The female normally lays only one egg every other year, but once mature the condor has virtually no natural enemies. However, it must compete with golden eagles and other scavengers for food.

It is hard to picture a condor until you've seen one. The nine-foot wingspan is difficult to comprehend. The only things to compare it with—NBA centers, sofas, subcompact cars—aren't things normally associated with winged flight. These wings give the condor the ability to cover 50 miles a day, riding the air currents like a glider, in search of food.

Such a bird has impressed both ancient and modern people. The condor has been portrayed in Chumash cave paintings and Miwok dances, as well as by poets such as Robinson Jeffers. The condor is reclusive and avoids human contact, adding to its mystique.

Until the 1880s the condor ranged as far north as the Columbia River, and south into Baja California. But with the arrival of large numbers of settlers, all that changed. Many condors were shot, out of fear, curiosity or even boredom. Scores of others were taken for exhibit in zoos or museums. Dozens of nests were raided by egg collectors, anxious for a specimen of the rare bird.

The shooting of condors continued to be a major source of their mortality until recent years; the latest known shooting occurred in 1976. But it may still be a problem. The chances of finding a shot condor are vanishingly small, and with a population of only 30 birds, every death is significant. DDT also played a part, thinning the eggshells by a third during the 1960s. Some have also credited compound 1080—an agricultural poison used to kill ground squirrels—with poisoning condors as well.

Human impact on condor rangelands has been equally devastating. The bulldozer has pushed into many formerly inaccessible areas; ORVs and tract homes often follow. Oil drilling has disturbed portions of the critical Sespe Condor Sanctuary, and a proposed dam within the sanctuary was only narrowly defeated by voters.

Even attempts to help the condor have often proved mixed blessings. The Sespe Sanctuary's first patrolman (who was not appointed until ten years after the sanctuary was created) moonlighted as a salesman for trail bikes and often sent his customers into the sanctuary for test drives.

Serious study of the condor got under way in the 1940s, carried out by Dr. Carl Koford. To date, his work remains the only in-depth study of nesting condors. A second report was prepared in the 1960s by Ian and Eben McMillan; they found that the species was declining at an alarming rate and recommended a number of measures to encourage its survival. One of the points they stressed was that condor nests should not be entered or disturbed.

But a few years later the Fish and Wildlife Service did enter nests, taking eggshell fragments and photographs. Ian McMillan charges that the condors abandoned the Sespe Sanctuary as a result, and it is true that few condors have nested there since the intrusion. The Fish and Wildlife staff denies any connection between the two events, and blames the continuing population decline for the lack of nesting.

By the mid-1970s it was clear that the current program to save the condor was not working. By all estimates the popula-

tion had dropped to 30 or fewer, and a Condor Recovery Team consisting of scientists appointed by the Fish and Wildlife Service prepared its "contingency plan" for saving the condor. The proposal's main points are these:

- All condors would be trapped and marked. The birds would be equipped with radio transmitter equipment in their tail feathers, tattooed, legs banded, and have markings placed in their wings. Tests would be used to determine sex, DDT level, parasites, etc. The birds would be captured, using either a "clap trap" or a cannon net and held for several days while the tests were run.
- Nine of the captured birds would be held for the captive-breeding program. Attempts would be made to get the females to "double clutch" (lay two eggs per breeding season). The young birds would be raised in captivity and reintroduced in the wild sometime after 1990, perhaps in areas once occupied by condors but outside the present range.
- Radio-tagged birds would be monitored by aircraft. Remaining wild nests might also be observed by closed-circuit TV cameras. Wild breeding pairs might be captured later if it was felt they were needed for the program. Eggs might be taken from these nests whether or not the adult birds are captured.

The U.S. Fish and Wildlife has thus far refused to accept comments from the general public or to prepare an Environmental Impact Statement on its plan. Instead the agency is preparing an in-house environmental impact assessment. It claims that since the program is part of the Condor Recovery Plan, it is a "document of biological expertise and not subject to the general comments of the public at large."

However, Sanford Wilbur, who has been studying the condor for the U.S. Fish and Wildlife Service for the last ten years, has indicated that he would welcome a public review, if only to clear the air. He also puts a little space between himself and the Washington, D.C., Fish and Wildlife staff. Wilbur recommends against double clutching, putting the birds on display or observing nests with TV cameras. Wilbur also advises against trying to capture condors this fall, which is the apparent intent of the Washington office. But Wilbur strongly supports the idea of captive breeding.

The plan has provoked strong protests from some conservation groups and biologists. Among the objections:

- Could the method of capture harm the birds? The cannon net is launched at a high rate of speed; it could cause injuries. Supporters of the plan argue that with experts in control there would be little danger, but with a bird as large and as rare as the condor, the question remains.
- Will condors raised in captivity be able to adapt to the wild? How will they handle storm conditions? Competition from the more aggressive golden eagle? Will the years in captivity result in the loss of important behavior normally learned during the eight-year period of immaturity? Will the birds pick appropriate nest sites?
- Are there dangers involved with double clutching? Will the increased egg production prove too great a strain on the females, shortening their lifespan and perhaps distorting their behavior?

The one condor now in captivity (TopaTopa, at the Los Angeles Zoo) offers the best evidence for both sides of the dispute. Seeing Topa is the closest most of us will ever get to a living condor, and it drives home the majesty of the bird as no exhibit or description can. The power and breadth of the wings; the beautiful, dark plumage; the sharp eyes and fleshy neck—seeing the bird evokes a desire to save it.

And yet the sight is also very tragic. Here is a bird gifted for flight, with an ability to soar that exceeds all others—held in a cage, unable to cover more than a few yards of airspace. TopaTopa has also been deeply imprinted by humans. He recognizes zookeepers by their uniforms and hops to the edge of the cage to greet them. Attempts to reintroduce Topa to the wild proved disastrous and almost cost the bird its life. The Fish and Wildlife Service says that this kind of imprinting can be avoided through careful practices, but the example of TopaTopa remains vivid in the mind.

Clearly there are many risks involved

Conservation Controversy

Captive breeding of condors has been an issue of intense controversy within the conservation community—and within the Sierra Club—for years. The Club's National Wildlife Committee cautiously endorses the concept of captive breeding, but not a particular plan. On November 6, 1977, the board of directors stated, "The Sierra Club opposes captive breeding at this time." A special task force has been appointed since then to study the issue; it plans to make a formal recommendation to the board in July 1979.

with the captive-breeding program. How acceptable these risks are depends on how you regard the condor's plight, and how much faith you place in the ability of the Fish and Wildlife Service to carry it off.

Sanford Wilbur maintains that the species is in a tailspin. "All indications are that the condor is on the way out," he says, and he sees captive breeding as the only alternative to extinction. He feels that the remaining population is becoming badly split by age and sex, and that action must be taken quickly in order to save the species.

Carl Koford feels that with six or seven immature condors in the population there is still a possibility of survival in the wild. But the October 1978 condor count found only four immatures—and two of uncertain age. Koford is calling for an intensive two-year observation of the birds to determine the probable results of the captive-breeding program. He suggests that with some enhancement of present conditions, the condor population could be increased without risking captive breeding.

The California chapters of the Sierra Club, along with Friends of the Earth, are calling on Interior Secretary Cecil Andrus to order a public review and full Environmental Impact Statement on the captive-breeding plan. In view of the continuing disagreement over whether the plan would work, the California chapters' Condor Task Force also is calling for an intensive two-year field study before any birds are captured. The Club's board of directors has appointed a panel of five scientists to study the question of captive breeding of condors. It plans to present its findings to the board in July.

Meanwhile, the condors continue to soar and feed as they have since Ice Age times, oblivious to the controversy that surrounds them. In recent months there have been reports of groups of condors in Santa Barbara and San Luis Obispo counties, which might be indicative of renewed activity in the western condor range. If this is the case it would be a favorable development, since major portions of the range are protected by existing or administratively endorsed wilderness areas. The sight of a condor in the air still gives inspiration and hope that somehow the species, despite all its troubles, *will* survive. □

Jeffrey S. Hudson cochairs the California Regional Conservation committees' Condor Task Force and is a newspaperman and freelance writer.

IN MEMORIAM
August 1978-February 1979

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

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COMMEMORATING WARREN OLNEY

A number of gifts have been received in the past year in honor of Warren Olney, one of the founders and early leaders of the Sierra Club. These funds are used to support the work of the Club in all its aspects—legislative, educational and legal.

"Leaves Three, Let It Be"

Poison Oak

Text and Photographs by
WILLIAM HELSEL

YOU ARE walking your dog in the woods one day, and he crashes off into the bushes, chasing a squirrel. You rush after him, not noticing the leaves that brush against you as you run, or the tree you duck under. Later, you notice some beautiful red, orange and yellow leaves on a vine. You pick them and bring them home. The next day you begin to itch, and soon your skin is covered with ugly red blisters, your eyelids are swollen almost shut. You feel like you're on fire. The medicine the doctor gives you doesn't make you feel much better, and it's a month before the blisters disappear for good. You've got a classic case of poison oak or poison ivy rash. But did you get it from the bushes, the vines or the tree? It might have been all three.

In early spring, new leaves emerge–tiny, fuzzy, brilliant red-orange.

Even if you've been warned about poison oak or ivy (they're pretty much the same), it's easy not to notice the plant. It appears in an amazing variety of shapes, sizes, colors and textures. Poison oak can look like a vine, a small bush, low ground cover, or even a small tree. Its leaves can be strikingly beautiful

The leaves grow rapidly, turning a rich copper or reddish maroon.

or drab. The plant may stand alone, but more often it grows intermingled with (and sometimes hidden by) other plants—with blackberry bushes, climbing high into trees, or lurking in tall grasses. The only constant feature of poison oak or ivy is that the leaves always grow in groups of three. It grows almost anywhere from Canada to Mexico, though it is rarely found higher than 5000 feet. It likes dry climates and wet

As they turn green, the leaves take on a beautiful patent-leather shine.

ones, and the plant is dangerous all year round.

In the East and the Midwest, the plant is called poison ivy and usually has sharply pointed leaves. In the West and South it is called poison oak and has rounded leaves, sometimes with lobed edges like some varieties of oak leaves. Two other dangerous relatives, poison sumac and poison-wood, live in swampy and boggy places in the East.

The poison in all these plants was first studied by

Left: *Soon, clusters of tiny flower buds open into delicate, subtly scented blossoms with greenish-white petals and yellow stamens.*

Right: *The flowers are followed by pale green berries, which later turn white or cream-colored.*

Japanese scientists. They extracted it from a plant much like North America's poison oak and ivy—the Japanese lacquer tree. They named the irritating substance "urushiol," after the Japanese word for lacquer, *urushi*.

The poison is found in all parts of the plant—roots, stem, leaves, flowers and berries. You don't have to touch the plant itself to become poisoned. You could

In early fall, the leaves turn yellow, orange or red, often with a brilliance that rivals the brightest maple.

pet your dog or cat after it has romped through poison oak. You could touch tools, shoes or clothing that have touched poison oak—or you could just stand in the smoke from burning poison oak. Once you've been touched by poison oak, the urushiol is quickly taken into your skin. Unless you wash it off right away, you'll probably get the rash, but it will eventually go away on its own.

While humans can best appreciate poison oak from a distance, many birds and animals eat it quite happily. About 50 species of birds eat the berries; deer are fond of the tender, young leaves and stems, and so are horses, goats, sheep and ducks. The extensive system of roots and runners poison oak puts out make it effective for controlling erosion on steep hillsides. And the dense tangles of its stems and branches provide cover and nesting places for small creatures.

The best way to avoid a painful rash, however, is to look carefully at plants where you live—and learn to recognize the many forms poison oak takes. If you can count to three you can stay safe. □

William Helsel is a free-lance photographer and writer with a long-time interest in plants.

Search for an Environmental Ethic

A. STARKER LEOPOLD

Footprints on the Planet: A Search for an Environmental Ethic. By Robert Cahn. Universe Books, New York. 253 pp. Cloth, $10.95.

ROBERT CAHN is a talented journalist turned conservationist. His effective writing on conservation issues came to the attention of the Nixon Administration, leading to his appointment in 1970 as one of the three original members of the Council on Environmental Quality (CEQ). Cahn's rich experience as a council member gives him a favorable vantage point from which to judge the development of environmental ethics and restraints in government, industry and public affairs. His book, *Footprints on the Planet*, summarizes these observations and evaluations.

Cahn introduces the subject by considering two of the more dramatic recent environmental issues—the Alaska pipeline and Tellico Dam. He uses these examples to illustrate the need for a sense of environmental values in judging management actions. The book traces the interesting sequence of events in Congress and in the White House (which Cahn was able to observe first-hand as a member of CEQ) and arrives at a candid appraisal of President Nixon as a conservationist (not very favorable, incidentally). To this reviewer, the most interesting and instructive chapters—5 through 11—concern the attitudes of American business leaders toward environmental affairs. Through specific examples the author recounts the actions of banks, mining companies, iron works, industrial forestry giants and a wide variety of manufacturing companies regarding environmental protection in the process of making a profit. Some cases illustrate admirable restraint and concern; others, gross disregard for environmental degradation and resource depletion. At best, American business is progressing toward an environmental ethic by fits and starts. But at least it is progressing.

The later chapters of the book extoll the virtues and benefits of private conservation efforts: voluntary simplicity in lifestyle, back-to-the-land movements, solar power and wind power, and the admirable and appealing concept that "small is beautiful." He traces the history of conservation thinking from the aboriginal American to the present, with emphasis on the merits of thoughtful and considerate use of resources. The book ends with a roll of the tough choices that lie ahead for Americans accustomed to the profligate life. Cahn's message is not new, but it is so well told that it may reach a wide audience beyond confirmed conservationists. □

A. Starker Leopold is Professor Emeritus of Zoology and Forestry at the University of California, Berkeley. His books include The California Quail *(University of California Press, 1977) and* Wildlife of Alaska *(Greenwood, 1973).*

Second-Guessing Environmentalists

(Why Didn't He Ask *Us*?)

JUDITH KUNOFSKY

The Environmental Protection Hustle, by Bernard J. Frieden; The MIT Press, Cambridge, Massachusetts, 1979. Cloth, $12.50.

BERNARD FRIEDEN'S new book purports to make the case that environmentalists in general and the Sierra Club in particular are behind a powerful, growing movement to keep the middle class from being able to afford and enjoy homes in the suburbs. The environmental movement's supposed "hostility to growth," "manipulation of serious environmental issues" (page 136) and "facade of concern for the public interest" (page 134) are claimed as evidence of an effort to protect and privately enjoy open space by getting the government to buy it. Environmentalists might be tempted to dismiss this book out of hand, but its publication by the prestigious Massachusetts Institute of Technology Press and the wide publicity the book has received make it a more serious threat than the usual anti-environmental tirade.

Bernard J. Frieden is Professor of Urban Studies and Planning at M.I.T., former director of the M.I.T.-Harvard Joint Center for Urban Studies and a consultant to several administrations on urban policy. He wrote this book after spending a year in the San Francisco Bay Area observing controversies over housing and growth.

Seven of the book's eleven chapters are case studies of battles over housing development in the Bay Area, many involving the Club's San Francisco Bay and Loma Prieta chapters. Frieden interviewed government officials, planners and developers throughout the country and concluded that the Bay Area is a preview of a powerful new version of "ex-

clusionism'' currently mushrooming around the nation. Old-style exclusionism sought to prevent low-cost housing, Frieden believes, in order to keep out the poor and various minorities. But the new exclusionism wants to keep out everyone and therefore has begun attacking even middle- or upper-income housing.

Frieden admits he cannot decide whether environmentalists really are opposed to all housing construction, whether ''no-growthers'' are manipulating conservation issues for their own purposes, or whether ''environmental activists are not fully aware of the contradictions in their own positions [on housing and land use] and have not yet figured out how to handle growth in an environmentally sound way.'' Frieden's uncertainty about environmentalists' motives and methods sometimes takes a more sinister form. He continually rejects what environmentalists say about their own purposes and insists on substituting venal intentions. For example, Frieden asks, ''For whose benefit do environmentalists want to preserve farmland? Is it possible that behind the facade of concern for the public interest environmentalists have mainly their own interests in mind?'' This is refutation by innuendo, and it recurs throughout Frieden's work with disappointing regularity. Whatever the case, the results of the mounting number of disputes over housing are clear to Frieden:

''The amount of housing blocked by controversies and either built after a long delay or not built at all is very large—large enough to make a difference in the price and availability of housing in the region. Second, the cumulative effect of successful efforts to stop housing developments must be to increase prices and to restrict the number of places where middle-income families can afford to buy new homes. Third, the effect of stopping or reducing the size of infill developments near the built-up parts of the region must be to increase the number of homebuyers who will live far from established job centers and will have to commute long distances at high personal and environmental costs. Finally, it is very likely that the pattern of growth controversies in the San Francisco area has discouraged the construction of carefully planned large developments and has encouraged in their place new homebuilding of lower quality'' (page 139).

It is important to note that many details found in Frieden's case studies are mistaken. For example, Marin County residents are described as having supported the establishment of the Point Reyes National Seashore merely to have federal funds used to protect their open space. Then, by refusing to allow expansion of the roads leading to Point Reyes, they ensured that ''outsiders'' could not ''come to visit the land they have bought.'' But this was not the case. In 1978, Point Reyes had almost 2 million visitors, 90% of whom are estimated to have come from outside Marin County. Either local residents failed in their nefarious plot or they concluded correctly that extensive road expansion was not needed to ensure public access.

Frieden does not discuss cases in which environmentalists joined with neighborhood groups to support housing proposals and higher densities. He never mentions that the Sierra Club cosponsored and organized, along with developers and housing interests, a 1977 conference aimed at increasing housing opportunities. Nor does Frieden recognize the fact that many Bay Area environmentalists live in cities, not in suburbs—or that many are not homeowners.

Moreover, Dr. Frieden's peculiar handling of studies, arguments and widely accepted data is disquieting—especially because Frieden's academic credentials are impressive. The reader is almost seduced into accepting Frieden's pronouncements, as when he rejects studies of the adverse economic and fiscal impacts of suburban growth as ''extreme'' or ''biased.'' (Studies he supports are called ''balanced.'') But his conclusions must be called into question even more seriously because of the internal inconsistency of his arguments.

For example, Frieden states, ''The open space that local growth opponents want is usually for private preserves, not public parks'' (page 10), but when environmentalists ''persuad[e] the federal government to buy land for a national seashore''—i.e., a public park—this is simply ''a key part of the plan for restricting new urban development'' (page 5). ''The new regulatory climate'' has ''raised housing costs without doing very much to improve the public environment'' (page 165), but environmental groups should support ''growth management strategies for urban areas'' (page 175).

Refutation by innuendo occurs throughout Frieden's book with disappointing regularity.

He believes in a ''trickle-down'' theory of the price of housing: ''Any substantial amount of housing construction, even for high-income groups, would meet part of the demand for more housing in Palo Alto, and would therefore relieve some pressure to convert existing low-income units into housing for the better off'' (page 111). But he rejects a ''trickle-down'' theory of the price of food: ''The [California Coastal] plan establishes no connection between [the maintenance of] coastal agriculture and food price levels . . .'' (page 125).

Among the reasons Sierra Club chapters cite which are, he claims, ''a tangle of contradictions that must raise suspicions about their motives'' are supposed opposition ''to new housing near the central cities on the grounds that it would use up scarce open space there'' (page 9), but environmentalists should ''negotiate for reasonable provision of open space within new developments'' (page 175).

Since Frieden's general analysis has received the most publicity, it is important to examine his basic argument, to wit: There are large numbers of families, Frieden believes, who need and want to buy homes. This desire is good and should not be changed or modified. These families, furthermore, will refuse to live in cities. Even if they were willing

(and admittedly there will be some increase in demand for urban housing over coming decades), cities could not accommodate the projected growth of population. Developers, Frieden goes on to argue, will not build in cities because the market isn't there. Any attempt, therefore, to limit housing in suburbs drives up the price of both new suburban housing and existing housing in both suburbs and cities. The environmentalist position against sprawl is based on three factors: protection of agricultural land, the need for open space, and energy conservation. The objections to sprawl, Frieden believes, are phony and self-serving.

And the agricultural land argument is nonsense, Frieden insists, because there is plenty of land, and technology will enable industry to produce more food than is needed. Open space is valuable only as scenery; some environmentalists want the government to buy it or to zone it as open space so they can enjoy it without having to pay for it. Other environmentalists want to halt growth in the suburbs simply because they like things the way they are. This is selfish, Frieden believes. Furthermore, many of the environmentalists' analyses of the fiscal impacts of growth are faulty, showing deficits when there really would be surpluses. Frieden rejects the argument that compact housing developments conserve energy. Finally, although environmentalists say that they want compact growth, they oppose housing wherever it is proposed, even infill housing, and therefore defeat their own stated goals.

Let's analyze these arguments:

The number of households in the Bay Area is rising very rapidly as the post-World War II baby boom comes of age and substantial migration to the region continues. But households with four or more people will actually decrease in numbers. These new, smaller households will consist primarily of elderly and young adults without children. The actual need for single-family homes with three or four bedrooms will be much less than Frieden implies.

Frieden cites public-opinion polls taken between 1964 and 1966 that seem to document the overwhelming desire of families to live in single-family homes in

the suburbs. Even if one grants that more-recent surveys show similar results, the public also shows great concern about sprawl. A December 1977 Field Institute study found that 79% of Bay Area residents believe the spread of cities needs to be controlled; 89% think the state should keep as much as possible of its productive land in food growing—even if it means building fewer houses in suburbs and rural areas. Moreover, 83% agree that if the quality of life in cities were improved, more middle-class people would choose to live in cities instead of moving to the suburbs.

The public, then, is perhaps very ambivalent, simultaneously wanting things for themselves that they acknowledge are unwise for society as a whole. Frieden does not challenge what he perceives to be the good and legitimate desire to move to the suburbs. Once people get to the suburbs, however, he regards them as selfish for trying to protect what brought them there in the first place.

Frieden's contention that cities can't accommodate the projected growth reflects his belief that "saving the cities" is not "the real issue." But it is! Suburban sprawl, loss of agricultural land and profligate resource use are inseparably linked with the deterioration of cities, as so many of the urban leaders at the recent City Care conference in Detroit acknowledged.

A study by the Association of Bay Area Governments, in developing recommendations for a comprehensive environmental management plan, concluded that if current trends of low-density sprawl continue, the Bay Area will run out of open land zoned for residental use by 1990. Therefore, an effective strategy to accommodate expected population growth must involve less focus on large-lot suburban development and more on high densities and on infilling of vacant parcels within cities. The ABAG analysis projected the results of a more "compact" form of new development and concluded that it would use approximately 26% less land by 1990 than would current patterns—land that would then be available for future housing construction. This compact-development scenario is nothing like "Manhattanization"; the average number of houses per

acre in 1990—if compact development were pursued—would still be fewer than today. The environmental movement, including the Sierra Club, strongly supports this proposal; groups described by Frieden as "moderately prodevelopment" oppose it and in so doing encourage more rapid exhaustion of land available for housing.

Frieden observes that developers do not always want to build where cities encourage them to, and he accepts their rationales unquestioningly. In discussing the city of Petaluma's growth-managment plan, for example, Frieden points out that "developers were not prepared to build as many units in western and central Petaluma as the city wanted. As the developers judged consumer demand," Frieden explains, "what the regulators wanted was not the same as what consumers would buy." This is absurd. Given the Bay Area's housing market, any new house—even at outrageous prices—will sell quickly. The desire for higher profits is more likely the true reason for some developers' reluctance to build in certain locations. But a more thorough analysis than Frieden attempted of why developers choose to build particular types of homes in particular locations might go a lot farther in helping regions to solve their housing problems.

Frieden acknowledges that housing supply and price, in general, are determined primarily by macroeconomic forces such as the availability of mortgage money, but in the effort to prove his thesis about environmentalists he ignores the legitimate interests served by growth management. *The Environmental Protection Hustle* reveals not even a glimmer of understanding of the real costs of growth to a community and its residents—both current and potential. Frieden complains that the "main effect" of growth-management plans is "to shift public service costs from local government to the developer and future residents." This, to Frieden, seems unfair. When discussing open space, however, Frieden reasons in the opposite direction. He believes that residents of a community—not government—should pay for environmental benefits. He fails to understand that the tools of growth management—zoning, utility hookup fees and limits as well as more explicit plans—are the only mechanisms a community has for influencing when and where new housing and jobs are to be located. To argue against them is to argue for no controls, which is what caused the flight to the suburbs and the decline of the cities. Growth needs to be channeled to areas where basic services such as water lines, roads, sewers and schools are already in place rather than to areas that would require expensive installation of services. Channeling growth in this way is both legal and moral, fiscally sound and environmentally responsible.

Frieden's lack of understanding of today's important environmental issues is also evident in his discussion of agricultural lands. Conversion of prime lands to urban use in California is unimportant, Frieden says, because even more land is turned to agricultural use through irrigation. He seems unimpressed with the fact that food grown on soil needing irrigation is more expensive, as water must be shipped over long distances and the energy required to convert deserts to gardens is rapidly becoming more expensive. This "new" land usually consists of poorer soils that also require expensive fertilizer and is probably located further from city markets, thus magnifying transportation costs, which already constitute a significant part of the price of food. But Frieden unaccountably believes that protecting agricultural lands adds to the cost of housing and, moreover, the food involved (in which category he includes apples and tomatoes) "seems to be mainly treats for their [environmentalists'] own tables." Even if Americans do want to maximize food production, Frieden says, we can count on "available technologies" which, if "fully adopted" would save the day. Though he quotes at one point from the Sierra Club's agricultural policy, he has failed to grasp its basic premise: that technical fixes are not adequate substitutes for the protection of good farmland. Since he is not concerned about protecting agricultural lands, he regards environmental support for it as simply a "cover" for protecting open space. And open space, for Frieden, means "scenic views." He ignores the vital role of open space in recharging groundwater, protecting watershed, abat-

ing air and water pollution and providing recreation.

Finally, Frieden apparently does not realize that some resources—such as land—are finite, no matter how strongly people feel about them. The public interest, accordingly, may not be well served by encouraging individuals to work towards acquiring such resources for their private and exclusive use. Frieden believes that expanding the amount of coastal land in public ownership or under public protection is not a good idea because it limits the number of families who can build homes there. But, as environmentalists have pointed out for years, the limited space available on the coast could never accommodate a significant fraction of the population. With California's population expected to increase from 22 million today to perhaps 27-29 million by the year 2000, the public can protect its interest in the coast only by expanding public access and use, not by maximizing private home construction.

All in all, does Bernard Frieden say anything of value? Well, a few things:

- There is no organized public advocate for housing for the middle class. Parties to controversy over particular projects are usually developers (suspect because of their economic interest) and current residents (who can always muster environmental or fiscal arguments against proposed developments). Frieden might be interested to know that environmentalists are deeply involved in Santa Clara County's current efforts to find ways to accommodate new housing.
- Environmentalists may have an undeserved reputation as opponents of housing. This impression may put off potential supporters and can be corrected by environmentalists becoming more vocal about their belief that environmental protection is necessary not only for public health, a healthy economy and full employment, but also for adequate housing.
- It is possible to couch selfish or narrow community motives in the language of environmental protection.
- Negotiations between environmentalists and developers focus on the possible tradeoffs between population and consumption. The goal of such negotiation is to reduce the adverse environmental impacts of proposed developments. But too often such negotiations result only in reducing the housing density of a development, thus in some cases exacerbating the problems of the region as a whole. There are a number of other "mitigation" measures that could be used to conserve energy and water or to reduce pollution and automobile use. These other mitigation measures would serve two purposes: first, they would enable fewer developments to accommodate the same number of people. Second, they would preserve environmental quality.

The most basic disagreement between Frieden and environmentalists may be over the question of interpreting human needs. Frieden prefers to "start with forecasts of population and economic growth and then propose ways of handling this growth and the needs it creates for housing." Such a policy takes regional population growth as an unchangeable given, an unalterable condition. But environmentalists have long believed that population trends and the complex mix of activities called "economic growth" are very much subject to the influence of social, economic and political decisions and choices.

Frieden is correct in saying that when environmentalists see a conflict between human activities and the constraints of the natural resources on which life depends, they want to change the human activities. This is not, however, a violation of anyone's rights; it is an affirmation of the basic human right to a healthy environment.

We would have told Mr. Frieden so, but, except for a brief interview with one person in 1976, he never asked the Sierra Club about its opposition to or support for housing proposals. Instead of acting like the responsible social scientist he claims to be, Frieden used the model of the physical scientist. Environmentalists were the "subject" of his study—as though they were rocks or pelicans or atoms, not capable of explaining their own motives, priorities and tactics to an investigator. Such a dialogue might have gone a long way toward correcting the many and fatal errors of *The Environmental Protection Hustle*. □

Judith Kunofsky is the Club's population and growth-policy specialist.

The Observer

ROBERT A. IRWIN

Accompanying this article are some photographs taken at the Club's 1979 annual dinner. This year, the dinner was a nostalgic tribute to the Sierra Club high trips of yesteryear. The diners' costumes varied from merely authentic to hilarious; the food was appropriately rustic and spirits were high. A commemorative Sierra cup was sold. Awards were given. Mush Emmons photographed the festivities for Sierra. *—The Editor*

Awards and Policies

Each year at its annual banquet the Sierra Club honors the special achievements of conservationists with a number of awards. This year the Club's highest honor, the John Muir Award, was presented to J. Michael McCloskey, the Club's Executive Director, "in gratitude for his forward-looking leadership of the conservation movement . . . and in appreciation for his wise and careful management of the Sierra Club through a period of rapid growth." A new award, for contributions to conservation by a public servant, also made its first appearance. The Edgar Wayburn Award, named for the chairman of the Alaska Task Force, former Club president and long-time conservation leader, was given to Representative Phillip Burton for "his vision and dedication, reinforced by statesmanship and perseverance [and] his great love for the American people and for the American land."

Five new Honorary Vice-Presidents were elected: Polly Dyer, Alfred Forsythe, Patrick Goldsworthy, William Siri and Raymond Sherwin.

The following awards were also presented: The William E. Colby Award to George Shipway; the Walter A. Starr Award to Norman B. Livermore; Distinguished Achievement Awards to Evelyn Murphy and to Cecil D. Andrus; the Oliver Kehrlein Award to Norton Meyer; the Francis P. Farquhar Mountaineering Award to William E. Siri; and Special Achievement Awards to John Baker, Kirk and Carol Patterson, Hal Thomas, Lee Wilson, Gordon Robinson, Richard Flint and Edward Easton III; Certificates of Appreciation were awarded to Amy Meyer, Harold Lockwood, Jill Swift, Margo Feuer, Ted Zobeck, Richard Tybout, Genny Schumacher Smith, Gene Andreason, Linda Lewis, Marvin Baker, Jr., Bob Warrick and Philip M. Hocker.

At the May meeting, the board of directors adopted a new policy toward nuclear power. It says, in part, "the Sierra Club supports the systematic reduction of society's dependence on nuclear fission as a source of electric power and recommends a phased closure and decommissioning of operating commercial nuclear fission electric power reactors." The full text of this and other recently adopted policies are available from the Board/Council Office, Sierra Club, 530 Bush Street, San Francisco, CA 94108.

Nine former Club presidents stood to receive the applause of the audience. From left: Raymond Sherwin, Phillip Berry, Kent Gill, Richard Leonard, Lewis Clark, Edgar Wayburn, William Siri, Brant Calkin and William Futrell.

Working for Wildlife

Can the efforts of just one person make a real difference in achieving environmental goals? The individual contributions of three Sierra Club members show that indeed they can. In 1975 a Vancouver housewife, a Berkeley student and a Manhattan "cliff dweller" separately decided to take personal action for endangered wildlife. Because of Rosemary Fox's resolve, British Columbia's conservation minister was eased out of office and a moratorium on wolf poisoning declared. Because of the energy and organizing skills of the student, Mark Palmer, the San Francisco Bay Chapter conducts one of the largest and best-coordinated wildlife programs in the Club; in Palmer's words, "the wildlife subcommittee has grown to be a statewide leader on wildlife issues in California." And lastly, because of Paulette Nenner's concern and initiative, many New York City purveyors of endangered species (or of their byproducts, such as ocelot coats or tortoise-shell trinkets) have been brought to justice and fined. Also, under her general editorship, *WIN (Wildlife Involvement News)* has been upgraded from a local two-page information sheet to a comprehensive, nationwide newsletter of as many as 24 pages—the only Club periodical devoted exclusively to wildlife.

Although he didn't win the prize for best costume, the Club's executive director, Mike McCloskey, did win the John Muir Award. Here he is pictured with a more conventionally dressed Cecil Andrus, Secretary of the Interior.

In Vancouver

Excessive "harvesting" of fish and game and an unreasonable "control program" against predators were the issues that first set Rosemary Fox and the Vancouver Group of the Western Canada Chapter on a collision course with British Columbia's officialdom. For some years she and her group (she's now its chair) had been aware of the exceptional wildlife values of a remote area of northern British Columbia (now part of the province's Spatsizi Plateau Wilderness Park). In 1975 she noticed that unusually large numbers of big game had been taken in the area by a local guide/outfitter. She reported this to the group and to the Sierra Club of Western Canada (the chapter's legal name), adding that not enough was known about the area's wildlife. Thereupon the Club asked the province's fish and game branch to ban hunting there until reliable data for managing big-game harvests could be developed. Later, from the transcripts of some unrelated legal proceedings against the same outfitter, Fox noted irregularities in the government's certification and licensing of the outfitter, pointing to a dubious relationship if not outright favoritism. In June 1977, after the agency had all but ignored repeated requests on the matter, the Club issued a strongly worded press release airing and documenting its charges. A judicial review ensued. Late in the summer of 1978 the inquiry's commissioner, Judge J. L. McCarthy, issued his report; it upheld the Club's charges, found the outfitter's license to be invalid and concluded that the fish and wildlife branch had committed "serious errors of judgment and acts of negligence, amounting to improprieties." The report further recommended tightening the top management of the agency and improving the outfitter provisions of the provinces's wildlife laws.

W. Mitchell, mayor of Crested Butte, Colorado, confers with Representative Phillip Burton (D-California) and Cecil Andrus.

Those modest recommendations were carried out (and then some!) early last December, thanks to some alert action by Fox and the Vancouver Group—this time to head off extension of wolf poisoning to the far north—a program intended to save caribou for hunters! Limited experimental poisoning had been carried out there in the winter of 1977-78. The following summer public statements by the conservation minister stirred fears that the wolf-control program would be expanded. Those fears were confirmed in early October by the leak of a confidential fish and game memo that sketched a scenario of incremental wolf poisoning over the next several years in all caribou areas with low calf-survival rates. The memo, however, failed to offer any scientific justification for the half-million-dollar program.

A Club-sponsored public forum on the wolf-poisoning plan was set for November 30th. Fox and her committee, along with people from Vancouver's univer-

Nick Clinch, executive director of the Sierra Club Foundation, in his well-worn climbing gear, won the contest for best costume.

sities, made the arrangements, recruiting a panel of two prominent wolf experts and two government officials. An overflow crowd of more than 300 attended, and another 100 had to be turned away. The next day the same panel plus a biologist who had surveyed the province's caribou herds in 1977 joined in a symposium at Simon Fraser University. The consensus from both discussions was that the data on wolf-prey relations were too meager to determine how to manage wolf-caribou systems. One panel member suggested that probably the best way to maintain the caribou population was not to poison the wolves but to stop hunting caribou.

Less than two weeks after the two meetings, the Ministry of Recreation and Conservation was abolished, its fish and wildlife branch absorbed into a new Ministry of Environment, and a new fish and wildlife minister was appointed. His first act was to declare a moratorium on further wolf poisoning pending a full review and an assessment of alternate methods of predator control. All in all, it was a signal victory for the Sierra Club and its environmentalist allies—and, of course, for the wolves. That victory in British Columbia dramatically demonstrates that the efforts of just one person can make a difference. Because the Vancouver Group is small, only 350 members, its "wildlife committee" is largely a committee of one—Rosemary Fox. The chapter newsletter editor credits her with "almost single-handedly" winning the group's wildlife battles.

In the Bay Area

In marked contrast to the experience of the small Vancouver Group, the 22,000-member San Francisco Bay Chapter has often had more volunteers for work on wildlife issues than it could handle—until recently, that is. In 1975 Mark Palmer, fresh out of the University

Edgar Wayburn presenting the first award that bears his name— for outstanding conservation efforts by a public servant— to Phillip Burton.

of California at Berkeley, joined the chapter's conservation committee to pursue his interest in wildlife. The first issue he encountered was the overpopulation of two species of exotic deer, fallow and axis, at Point Reyes National Seashore. The National Park Service had been trying to reestablish the native tule elk there, but the exotic deer had seriously overgrazed the range. Palmer was made chairman of a subcommittee to work with the Park Service to find a solution, which turned out to be the humane shooting of the excess exotic deer. Palmer's subcommittee became permanent. The chapter's conservation committee now refers all wildlife issues to it, permitting ongoing, consistent and responsible ac-

An unusual lobbying tactic was employed by Friends of the Coast to encourage Interior Secretary Andrus, who had just finished his speech, to halt an offshore lease sale in California.

tion instead of sporadic, rushed reactions to emergencies.

Under Palmer, the wildlife subcommittee has developed an ambitious program of activities and projects. At least half its 60 members meet once a month in a combined educational program and work session, at which all attending take part in discussion and decision making. No tight little clique, the subcommittee is the nearest thing to pure democracy in action, according to Jim Pachl, its current chairman. Most important, he says, is the involvement of new people in the subcommittee's work. The tasks are virtually boundless: attending hearings, lobbying at state and local levels, doing research, preparing reports, conducting investigative field trips, speaking to groups, presenting testimony before public bodies and contacting the press. The issues and problems the subcommittee deals with are equally varied, from local to international in scope. Here are some of them:

- Protecting the harbor seals' favorite rocky refuge at Strawberry Point on San Francisco Bay from the threat of development;
- Opposing a ranching venture on Tomales Bay (near Point Reyes). The owner wants to raise Rocky Mountain elk for their horns, which are believed by some Chinese to have aphrodisiac qualities. The process of removing the horns involves their painful amputation when the elk are in velvet;
- Seeking state legislation to prevent continued diversion of water from Mono Lake, whose decreasing level now threatens one of the most important waterfowl sanctuaries in the eastern Sierra;
- Continuing pressure to curb the killing of California's two native big cats, the mountain lion and the bobcat, both endangered species; and
- Halting the killing of whales. The subcommittee's Whale Task Force has been developing a new program for the Club. Its earlier recommendation to abandon a boycott of Japanese products was adopted by the board. Part of the new program was the Japanese-American Environmental Conference held in Tokyo in July 1978. The subcommittee worked with the Club's International Committee to organize it. A similar meeting will be held at Stanford University in the summer of 1980. While the 1978 conference did not achieve immediate results on the whaling problem, according to Pachl, who attended it, some bonds were established between U.S. and Japanese environmentalists.

Mark Palmer has built a strong cadre of wildlife defenders for his chapter and for the Club as a whole. Since becoming the chairman of the Northern California Regional Conservation Committee he will be able to take only a minor part in the subcommittee's affairs, but he has seen to it that the wildlife subcommittee did not become a one-man show. Constant recruiting, letting volunteers know they are wanted and that what they do is important, rotating duties and leadership—all have made this young outfit perform like a team of seasoned pros.

In New York City

The canyons of New York City would seem an unlikely habitat for wildlife enthusiasts. Yet one of the Sierra Club's oldest and largest wildlife committees, the Atlantic Chapter's, is centered there. No peregrine falcons nest there, nor do grizzlies roam in Central Park. But a huge illegal trade in endangered wildlife species and products is carried on in New York. When Paulette Nenner decided to do something for wildlife, that illegal trade was the hottest issue—and one that required actual work as well as study and discussion. In 1975 the chapter's most active unit was its endangered species task force, as it had been since the committee

was established some ten years ago. Nenner soon became one of the task force's coordinators. Members were assigned either to a department store or to a specific area of small shops, which they surveyed monthly for violations of endangered species, and if members saw evidence of a violation, they would notify the state attorney general's office, which then sent an agent to investigate. In 1976-77 the task force was responsible for 85% of the state's prosecutions of endangered species violators in New York City.

In 1977 Nenner became head of the wildlife committee and devoted much of her time to the newsletter. Renamed *WIN*, it had become an expanded and more sophisticated version of the earlier monthly report of the Atlantic Chapter Wildlife Committee. She also was able to establish valuable ties with the state Division of Fish and Wildlife, which worked for the same conservation values as members of her committee. When hunting groups tried to have the fish and wildlife agency removed from the Department of Environmental Conservation and stripped of most of its power, the committee's testimony (prepared by co-chair Karla Slap) helped defeat the move. The committee now is working with the division to develop a nongame wildlife program for the state, the first time the division has worked directly with any environmental organization.

A number of other chapters are as active—perhaps even more so—as Atlantic, San Francisco Bay, and Western Canada. The Rocky Mountain, New England, Florida, North Star (Minnesota) and New Jersey chapters are among them. If there is no Sierra Club outlet in your area for your wildlife enthusiasm, write to Mark Palmer or Jim Pachl at the San Francisco Bay Chapter, 6014 College Avenue, Oakland, California 94618, for suggestions on how to start a wildlife committee and program.

Sierra on Cassette

A nonprofit organization called Volunteer Services for the Blind is now recording articles from *Sierra* on cassettes for use by blind and handicapped people. The *Sierra* cassettes, along with a number of others, are available for a nominal fee; direct inquiries to Recorded Periodicals, Division of Volunteer Services for the Blind, 919 Walnut St., Philadelphia, PA 91907. □

Guest Opinion

Dancing Flames Versus Blue Teeth

Should Campfires Come in a Can?

BRUCE BERGER

Bruce Berger's book on Glen Canyon, There Was a River, *was published by Northland Press this spring. He is a free-lance writer.*

AT THE FIRST BLUSH over rimrock, before the bats have gone to bed, my heart kindles for the first sip of coffee. I slip out of my bag, rush into my clothes, then snap the dead tips off the nearest rabbit brush. Last night's ashes are still warm. I make a pyramid of twigs over the rabbit brush and touch a match to it—flames leap. Pungent smoke curls into the sky. By the time the first light touches rock, I am taking the first black sip.

Is it the coffee or the dawn? As the canyon awakens, layer by layer, I feel the day being born inside me. By the second cup, the sun has splayed the shadow of a nearby juniper onto a pink dune. I let the fire die down, then build it back up. Miraculously my campmates are still asleep, and I don't dare even blow my nose for fear of honking them all awake. By the time sunlight touches my skin, I am stirring the third cup: this is my private coffee ceremony, my way of sending the sun a responding flame.

It was a shock, then, to camp for the first time with friends who detest campfires. At first they ignored my pall oozing luxuriously downcanyon, and choked in silence. Then Remo, cautious at first, explained, "It isn't only the smoke. It's also that fires strip whole areas of their natural dead wood. They leave black scars on the rock. Most people don't dismantle them afterward, so you run into these little construction sites everywhere. The peace is shattered by people breaking wood down to size. The smell sticks to your clothes. When the wind changes, your tear ducts ache. A campfire has all the charm of a power plant, shrunk to scale."

Gloria added, "But what I really can't stand is the way everyone stares at the coals after dinner without saying anything. The fire is the camper's boob tube."

I halfway agreed. I was aware of, even applauded, the ban on fires in parks where entire campgrounds are being denuded and campers attack live trees for wood to burn, not to mention in areas where the danger of forest fires is extreme. When we broke camp I dutifully scattered the rocks, dispersed the unburnt wood to simulate disorder, kicked or buried the ashes, turned stones to their clean sides, and left only a little charred sand for evidence. But I've never felt my wilderness experience was destroyed by someone else's discreet firepit. As for fire's social value, despite Gloria's disclaimer, it was the radiant heart of the campsite. It carved a lighted room out of darkness. Around that dance of flame, conversation was lively and profound.

I noted with perverse satisfaction the hiss of Remo's and Gloria's white-gas burner filling the canyon like the sound from a far expressway, but I began to hear as well the crash of my own boot on a branch, breaking it into small pieces. I began to observe the direction of my smoke and to plan my campsites downwind, cringing when a shift in the breeze swung the smoke toward disapproving nostrils. I watched insects run from their hideouts, ants crawl from burning logs. Smoke chased me accusingly around the fire, reddening my eyes. And I began to resent scrubbing charred pots whose soot inevitably migrated from aluminum to skin to clothing. I pondered the alternative.

Should I use some gaseous little device? The burner, with bottles of white gas or cartridges of butane to fuel it, would displace from my pack items I like having along and, unlike fallen timber, this fuel would have to be paid for. These small stoves have a reputation for hating their masters, they scheme insurrection in mid-omelet. Their odor is noxious, their dancing flames a ring of orderly blue teeth, the seethe of jets their answer to crackling wood. As for my coffee ceremony, I might as well be back at the kitchen range. I pictured ethical campers sitting in a ring around their pooled burners, baring their pure souls. . . .

In the larger context, burners are made of metal that has been prospected, mined, smelted, assembled and shipped. The gas has been explored and drilled for, refined and transported. The finished amalgamation is advertised and sold. The traditional campfire, using a local, renewable resource, is soft technology; gas burners typify the massive, discredited hard stuff.

Fire, on the other hand, for those who grew up with its glow, retains sacramental magic. It is a last link with our pioneer tradition. It was by Prometheus' mythic theft of divine fire that humankind rivaled the gods. Heraclitus proclaimed all creation a form of fire, and the dancing patterns of contemporary physics are metaphorically in concert. From orthodoxy to alchemy, fire is the agent of transformation, the progress of the soul, and a rack of votive candles in a dark alcove gladdens even my own agnostic heart. Surely a backpacker seeking wholeness in the wilderness is incomplete when limited to earth, water and the ether.

Regardless, Remo's and Gloria's dissent gnawed at me. Fire truly was a soft technology when there were great ex-

Dead wood is not renewable at the rate it is being used, nor does its harvesting leave wilderness looking wild.

panses of open lands, a sparse population of native peoples and a beginning influx of pioneers. Nature's tolerance was not exceeded then. But with the continuing eradication of wilderness and the exponential increase in camping, the ratio is reversed; dead wood is not renewable at the rate it is being used, nor does its harvesting leave wilderness looking wild. The untamed is naturally disarrayed, and we campfire enthusiasts are in danger of turning it into a pruned garden.

The image of brave souls gentling the night with fire still haunts many of us, from backpackers to hunters to professors of anthropology and American art. Nevertheless, subject to individual mandates, local conditions and changing personnel, open flames are being banned from our national parks or restricted to tight compounds. Regulations are fierce enough that one feels like a junkie who must be monitored, if not redeemed. For the moment, one can repair to national forest, Bureau of Land Management or private land that has not been posted, but the message is clear: campfires are on their way out. And I am caught between ethics.

At Christmas Remo and Gloria, my clean-burning friends, sent me an incriminating photo of my campfire filling a canyon with smoke. I retaliated in verse signed Smokey the Unbearable, but recognizing the lameness of that, finally took the plunge—I invested in a nasty little burner. Testing it at home, I found it made heat with minimal stink, and so packed it—mainly out of curiosity—into the wilds.

I was first struck by the unexpected freedom. Relieved of the search for firewood, of locating and constructing a pit and of the final unblacking of the pots, time opened up for serious lounging. I was free to camp in the margins, to socialize at will and retreat to my lair. The hiss of jets was brief, and gave way quickly to the sifting of wind and the night cries. My eyes, no longer directed at the firepit, adjusted to silhouettes and stars. The burner did take room in my pack that would otherwise be occupied by, say, a little more rum, or gloriously empty space, and my back was not enchanted with the weight of three fuel cartridges. And social life was not enhanced by members of the party cooking by themselves. But heat was instantaneous and without guilt: I was Prometheus unbound.

Now, of course, my sacred dawns are less sacramental. First light touches rimrock without the pungency of juniper smoke, the ceremony of an answering flame. But there is another satisfaction: knowing I needn't burn wood that has lived a thousand years and has become in death a shelter for scorpions, termites, centipedes and their brethren. Those creatures have adapted to the wilderness; now it is my turn. □

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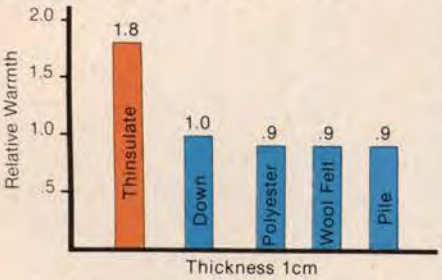

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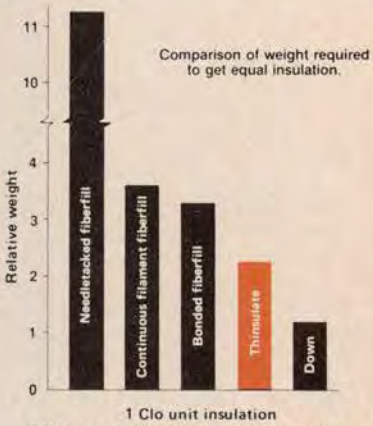

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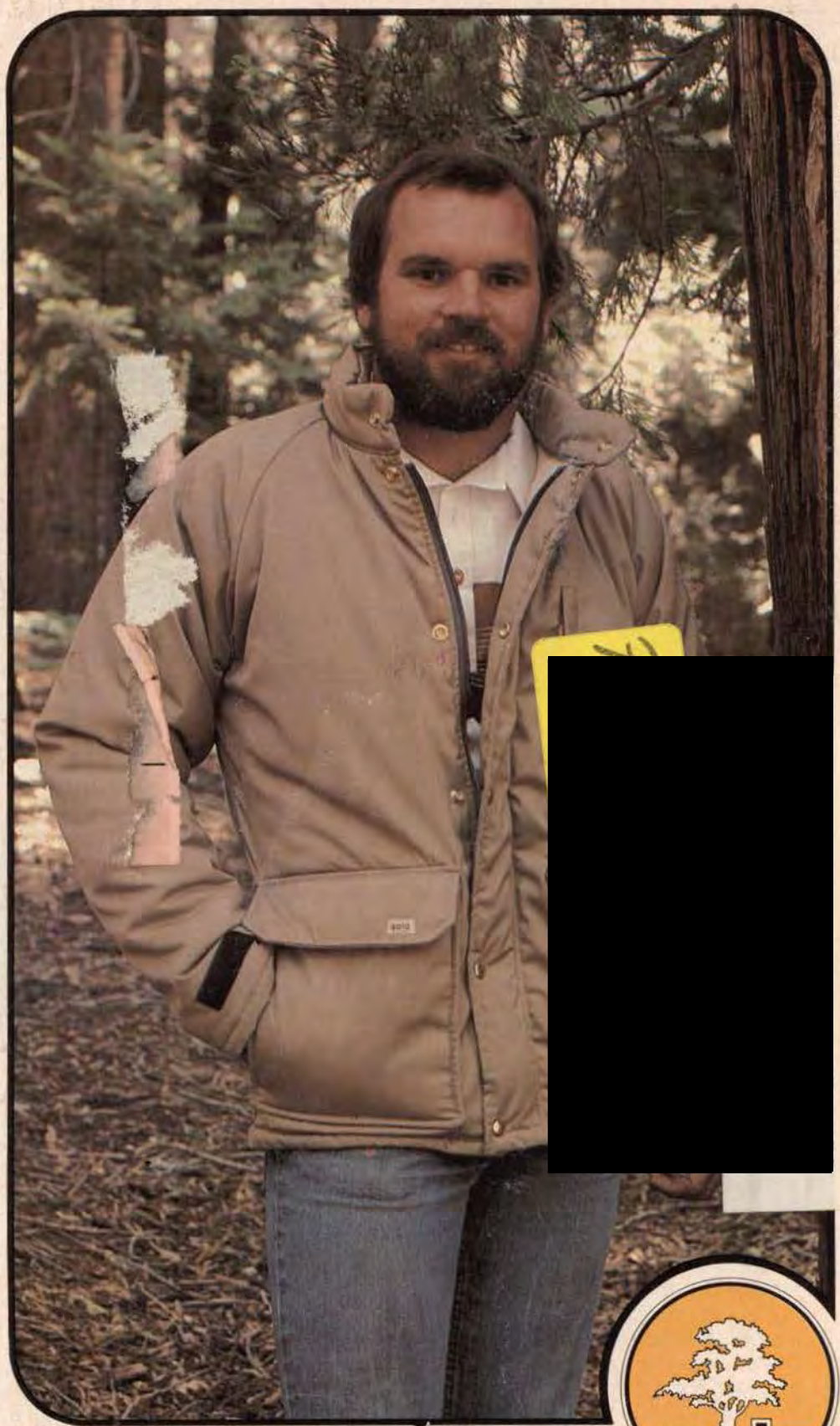

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