

Sierra Club Bulletin



November/December 1974

Rebirth of a Wilderness
Sierra Club Spring Outings



The National Audubon Society and the Sierra Club, two of the world's oldest and largest membership conservation organizations, will host the world's first privately sponsored international conference to focus comprehensively on the world's dwindling heritage of natural areas—its forests, grasslands, tundra, wetlands, islands, mountains. It will take place June 5-8, 1975, in New York City.

It will be the 14th Biennial Wilderness Conference. In keeping with the historic tradition of the past biennial wilderness conferences sponsored by the Sierra Club alone, it will attempt to offer a statement of first priorities for natural area protection. Initiated in 1949, these conferences have produced the definitive thinking for legislation on wilderness protection in North America and have involved Americans nationwide in this effort.

An action plan for global cooperation will be a goal of the conference. The theme is "Earthcare: Global Protection of Natural Areas." The "Earthcare" proposals will be submitted for consideration at appropriate international forums such as the September 1975 world meeting of the International Union for the Conservation of Nature in Zaïre.

A general conference declaration of the need for "Earthcare" will be developed in advance and opened for signature by participants.

EARTHCARE: GLOBAL PROTECTION OF NATURAL AREAS

Starting with the North American concept of wilderness, **an extended concept of 'wilderness' is expected to evolve at "Earthcare"** that will also be relevant to protection of the world's natural areas beyond the North American experience.

The 1975 conference proceedings will be published in book form and will be given global distribution.

"Earthcare" Conference Co-Chairmen will be the Honorable Raymond J. Sherwin, a California Superior Court Judge and former Sierra Club President, and National Audubon President Elvis J. Stahr, former Secretary of the Army and university president.

Spokesmen from the private and governmental sectors of developed and developing nations as well as from international agencies and institutions will be conference participants. In recognition of the important role United Nations agencies can play, "Earthcare" is being held in New York City, U.N. headquarters, and the "Earthcare" agenda will include visits to the U.N.

The 1975 World Environment Day on June 5 will coincide with the "Earthcare" meetings. A special salute is anticipated in cooperation with the U.N.

Field trips following "Earthcare" will offer conferencees first-hand experience with the unique "urban" wildlands and open spaces that are readily accessible to the 7.7-million inhabitants of the New York City metropolis:

- **Gateway National Recreation Area**, the first of the new national parks within urban areas, which includes the **Jamaica Bay Wildlife Refuge** right within New York City's borders where 300-400 species of birds can be seen.
- **Harriman Interstate Park**, the scenic Hudson River wilderness park about an hour above New York City.
- **The Catskill mountains**, where protection of watersheds is linked to protection of wilderness.
- **The Adirondack Forest Preserve**, the keystone example of public and private land use planning to safeguard an exceptional wilderness area.

14th Biennial Wilderness Conference

Co-sponsored by the Sierra Club and the National Audubon Society

June 5th to 8th 1975 at the New York Hilton Hotel

for details write EARTHCARE, 777 United Nations Plaza, New York, N.Y. 10017 (212) 867-0798

EARTHCARE posters available, \$3.00 (postage incl.) Write to above address.

Sierra Club Bulletin

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Cover: Marvin Mort has recorded the evanescent meeting of ice and autumn litter in the Pennsylvania woodlands near his home. Inside, Maurice J. Forrester makes an eloquent appeal for preserving his own favorite island of Pennsylvania wilderness.

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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REBIRTH OF A WILDERNESS

MAURICE J. FORRESTER, JR.

NO ONE CAN SAY with certainty how St. Anthony's Wilderness got its name. One version has it that in 1742 Count Ludwig von Zinzendorf, a Moravian missionary, climbed to the crest of the Blue Mountain in southeastern Pennsylvania and, after contemplating the primeval splendor to the north, named the valley "Anthony's Wilderness," in honor of Anthony Seyfert, a friend and fellow missionary. If this is the true version, then the Moravian Seyfert was speedily canonized, since the name, "St. Anthony's Wilderness," appears on a map believed to have been printed shortly after the Revolutionary War.

However it came about, the name stuck and is generally applied today to a system of long, narrow ridges and valleys running east and west through Dauphin and Lebanon counties. Although the area's boundaries are rather fuzzily defined, it is generally thought to lie between state route 325 to the north, Second Mountain to the south, Gold Mine Road to the east, and Ellendale Forge to the west.

Along with a number of lesser-known trails, both the Appalachian and Horse-Shoe trails pass through the region, providing access to hunters and fishermen in season, and hikers year-round. Motor vehicles, however, are barred by state game commission regulation, making this the largest roadless tract in Pennsylvania's populous southeastern quadrant. Located only about a dozen miles from the state capitol in Harrisburg, and a hundred miles from the Philadelphia metropolitan center, St. Anthony's Wilderness is a jewel of tranquility lying within two hours' travel of half the state's population.

At the crest of Stony Mountain, near the center of St. Anthony's Wilderness, stands a massive stone tower rising some 30 feet high and measuring perhaps ten feet square at its base. The original purpose of the tower is not known and has been subject to much idle speculation in recent years. It is, however, a magnificent example of the stonemason's art, evoking unvarying admiration in the occasional hikers who pass that way. But slowly and relentlessly the passing seasons are taking their toll. Each year sees one or two more stones dislodged from their places and fallen to the ground. Inevitably, the day will come when the tower is nothing more than a jumbled pile of stones on top of the mountain. And when the last stone falls from the mysterious tower, will it be the final act of St. Anthony's Wilderness reclaiming its own? Or will it signal instead the awful evolution of one century's naive industry into the next century's sophisticated madness?

"In exploiting such lands a second time, we shall not merely be imitating the example of our ancestors; for what they undertook in blithe disregard, we shall be pursuing in cynical indifference, and our intentions will be armed with a capacity for destruction they scarcely could have imagined."

Maurice J. Forrester is a member of the Pennsylvania Chapter of the Sierra Club.

The story of St. Anthony's Wilderness is one we find repeated throughout the eastern states. Lands explored, cleared, and settled relatively early in the history of this country were exploited and later often abandoned if they ceased to provide a living. Left alone, nature began to reclaim the land; time began to heal its scars. Whether this healing process will continue now depends not so much on what our forefathers did in their time as what we will refuse to do in ours. For today, when areas such as St. Anthony's Wilderness are at last beginning to return to something like their primitive condition, they have caught the attention of men who would repeat the destruction of the past. For example, two hydroelectric dams are proposed for Stony Creek in the heart of St. Anthony's Wilderness. Unlike the tower on Stony Mountain, they will not crumble in a century or two. Given the efficiency of our methods and the permanence of our monuments, a second recovery of the land would require ages, if it happened at all. In exploiting such lands a second time, we will not merely be imitating the example of our ancestors: for what they undertook in blithe disregard, we will be pursuing in cynical indifference, and our intentions will be armed with a capacity for destruction they scarcely could have imagined.

THE REGION was first opened to settlers in the 1750's. Gradually, a few families drifted into the area to try their hands at farming the rocky soil. There was probably also some rudimentary lumbering on a very small scale. It is known that two small villages came into existence—Rausch Gap and Yellow Springs—both of which were stops on the stage line that later gave the region regular contact with the outside world. All in all, however, the wild, unspoiled character of St. Anthony's Wilderness was probably little changed until the middle of the 19th century, when the discovery of coal triggered a boom that swelled the valley's population from a few families to at least 3,000, and possibly as many as 5,000, inhabitants by the waning years of the century. A third village, Gold Mine, appeared during the coal-mining boom, taking its name from a mine that was opened to exploit a vein of coal of such high quality that the owners

considered it to be as good as gold. But like all the other veins in this area, the Gold Mine vein was shallow and soon exhausted.

To serve the coal-mining industry, the Schuylkill and Susquehanna Railroad brought its track into St. Anthony's Wilderness, with one main line running the entire length of the valley and several spur lines branching off to the various coal-mining operations. The advent of the railroad made it easy for visitors to get to the

When the last stone falls, will it be the final act of St. Anthony's Wilderness reclaiming its own?

region, and around 1880, a resort hotel was built to exploit the mineral springs that had been discovered. Those who could afford the luxury came from as far away as Philadelphia and even beyond to renew their ailing bodies in the healing mineral baths offered by the Cold Spring Hotel.

As coal mining tapered off, lumbering became the principal money-making activity of the region. The same railroad lines that once served the coal-mining industry were now turned to hauling lumber. When the forest to the south of Stony Mountain was all cut off, lumbermen shifted their activity to the north side of the mountain and even down into Clark's Valley. Lumber cut there was hauled to the top of the mountain on an incline, then dropped down another incline on the south side to the main line of the S & S Railroad, which then carried it away to market.

By 1900, it was all over. The shallow veins of coal were long since played out; the mineral springs no longer tempted the ailing rich of the big cities; the mountain sides were stripped bare of trees. All the lures that had brought people into the valley were gone. Then, the people themselves left; the railroad stopped running; and quiet descended once again on the despoiled wilderness. A population that once numbered several thousand dropped in the early years of the century to virtually zero.

For several decades thereafter nothing happened. Between them, the railroads and the coal companies owned the land. But since it offered

them no profit, they did nothing with it. If a buyer could have been found, probably they would have sold out; but no one else wanted it either. So the land was left alone, and the healing process began, with no one to watch but an occasional hunter or fisherman, or an even more occasional hiker.

Finally, in the 1940's the land was purchased by the Pennsylvania Game Commission, an action which, until now, has served to preclude any further development of the area. State Game Lands Number 211 (the official designation for this area) is a tract of over 36,000 acres, about 18 miles long and 3 miles wide on the average. Today, it is a beautiful second-generation wilderness, traversed by typical Appalachian ridges reaching an elevation of about 1,500 feet, teeming with wildlife, and laced with icy streams—streams whose names sing a song and tell a story: Stony Creek, Rattling Run, Devil's Race Course, Rausch Creek, Gold Mine Run. The signs of man's former habitation are readily apparent: old mine workings, railroad beds, scattered foundations of former buildings, even a small cemetery with a few stones that bear inscriptions from the 1850's. But all these souvenirs of past human activity have been so softened and mellowed by the passing years that they scarcely add a discordant note to the surrounding wilderness, enhancing it, rather, with a certain aura of wistful mystery. And in time, these monuments, like the stone tower, will crumble into memory.

It is hardly useful to suggest that for the sake of sparing a virgin continent, our forefathers should have

"It is hardly useful to suggest that for the sake of sparing a virgin continent, our forefathers should have stayed in Boston . . ."

stayed in Boston or Philadelphia—or never left England at all—but we can regret the avidity with which they embraced the new land, the thoroughness with which they used it. At the same time, we can also be thankful that in many places, such as St. Anthony's Wilderness, these men, having wrung from the land what they



could, then abandoned it for time to care for, leaving behind them only such relics as the tower on Stony Mountain. Those of us who wish to prevent a second violation of the eastern wilderness take a charitable view of such mementos, preferring to overlook them rather than overlook the land itself. For we now have an opportunity in many areas to assure that the healing power of time is

“With the aid of today’s . . . technology, another scheme has again been devised for wrenching dollars from the wilderness.”

allowed to complete its work. But if those who would repeat the actions of our forefathers are permitted to pursue their narrow vision, places like St. Anthony’s Wilderness will probably be lost for good.

WITH THE AID of today’s advanced technology, another scheme has again been devised for wrenching dollars from the wilderness. Pennsylvania Power and Light Company (PP&L) and Metropolitan Edison Company have jointly proposed to dam Stony Creek in order to build a hydroelectric pumped-storage facility in the heart of St. Anthony’s Wilderness. If this proposal is implemented, about one-third of the valley floor would be flooded not only to generate electricity, but to store it, and to do this in a way that all parties concede is flagrantly inefficient.

Two reservoirs would be constructed, one behind the dam to be built across Stony Creek, and the other higher up Stony Mountain. During periods of slack demand, power would be taken from the lines of the utilities and used to pump water from the lower reservoir into the upper reservoir. Later, when a peak-demand period strained the generating capacity of the two companies, the stored water in the upper reservoir would be released to rush back down to the lower, in the process turning a generator and producing electricity. Unfortunately, for every three units of power used to raise the water in the first place, only two are recovered when the water returns. The remaining third is lost.

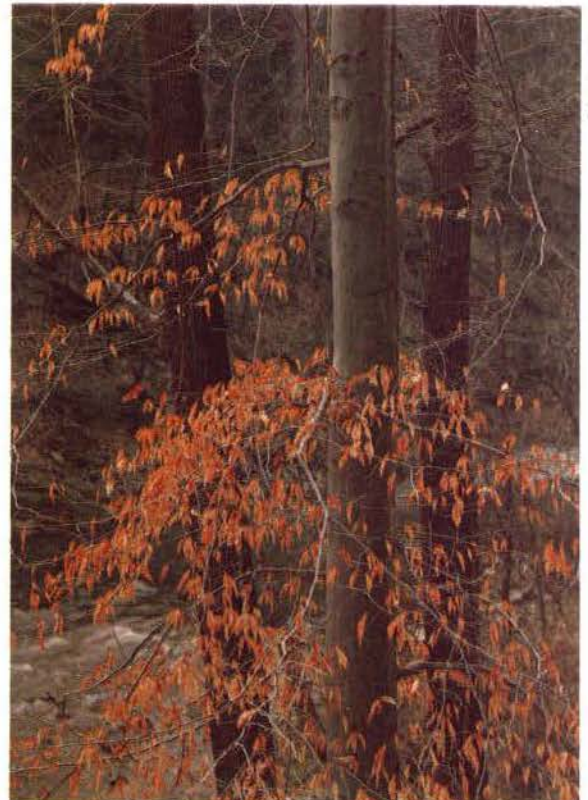
In order to acquire the land necessary for the construction of this facility, the utilities have entered into an agreement with the Pennsylvania Game Commission to trade 5,400 acres now owned by PP&L in a valley to the north for 1,700 acres in the middle of the wilderness. Not only would the heart be cut out of this pristine valley, but the wilderness value of the surrounding acreage retained by the game commission would be diluted by the presence of access roads and transmission lines. Stony Creek itself would, of course, be destroyed. In defense of this unconscionable abdication of its public trust, the game commission smugly points to the added acreage it is acquiring, and ignores the destructive surgery that would be performed upon a natural treasure.

Rallying slowly at first, but with increasing vigor during the past year, opposition has been mounted to battle the proposed destruction of St. Anthony’s Wilderness. The Stony Creek Valley Coalition has been formed and counts among its members the Sierra Club, the National Audubon Society, Trout Unlimited, the League of Women Voters, and a host of local organi-

zations. The coalition contends that the decision to build this pumped-storage facility, originally made in the 1960’s, is no longer valid or socially acceptable. They argue further that by the mid-1980’s, when the project is scheduled to be completed, rapidly advancing technology in this area will have made pumped storage obsolete as a means of storing electricity.

On a more basic level, the coalition questions the real need for an additional storage facility, noting that effective conservation measures coupled with a change in the present rate structure to eliminate waste by large industrial and commercial users would make the construction of an additional facility of this type unnecessary. Finally, it is argued that if the utilities can prove the absolute need for a pumped-storage facility, then such a project could be built in a strip-mined or quarried area where the environment has already been so debased that the likelihood of further damage is academic. The battle is on. What the outcome will be no one knows. All that is certain is that the many people who love this region will not permit it to be ravished a second time without putting up a bitter fight.

“ . . . we now have an opportunity in many areas to assure that the healing powers of time is allowed to complete its work. But if those who would repeat the actions of our forefathers are permitted to pursue their narrow vision, places like St. Anthony’s Wilderness will probably be lost for good.”



Martin Mort

THE BARK WAS THREE FEET THICK

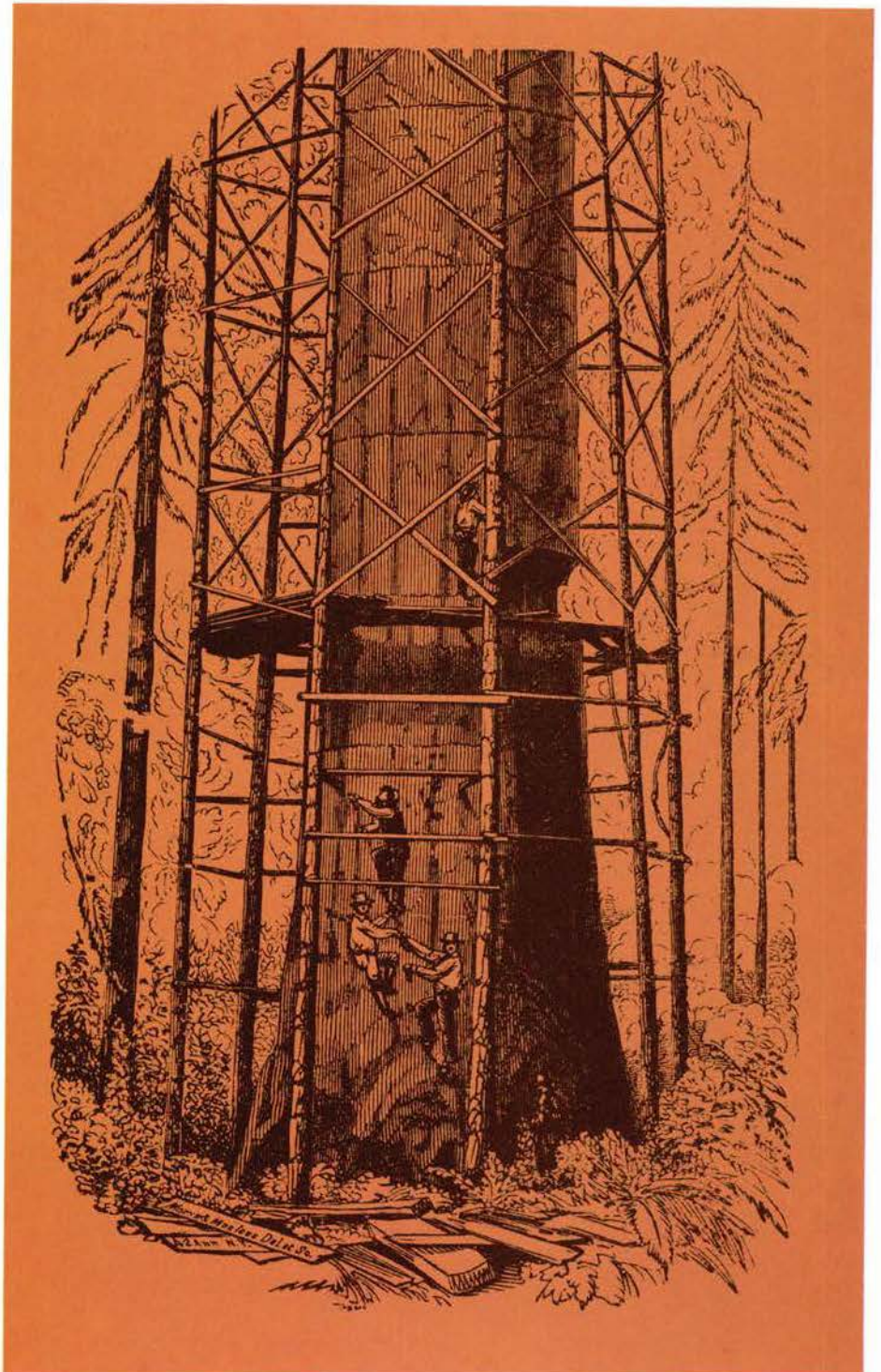
*This excerpt is from a work of nonfiction called
A More Goodly Country, A Personal History of America,
copyright John Sanford, Horizon Press, New York, 1975.*

HE OFFERED to bet that he could fell it with an ax inside of 30 days—a month's pay for a month's work, he bragged—and he was covered. In money, the stake didn't come to much, a hundred at the most, nor did the braggart in his person make the little seem a lot: his fame, if any, was known to few, and none of the few knew his Christian name. Nor did the place sweeten the pot—a joyhouse, like as not, or some San Joaquin saloon. What gave the bet size was the size of the tree.

It grew near Dinkey Creek, a tributary of the North Fork of the Kings, and it'd been growing there since the Year One, meaning the one in 1 A.D. At the rise of Christ, it had 33 plies, and it comprised 79 for Pompeii. Fire scarred it when Roland died betrayed on the Pampeluna road, and drought and flood tried it, and heat and freeze, and it stood off moth, disease, sapsucker, and the pest that fed on seed, and it lived through lightning (sheet, fork, chain, and ball) and through wind and rain and the crescent hazards of age. So tall was it, some swore, that it touched the face of the moon, and to band the base, it took a ring-around of 20 men. The Old Gentleman, the stick was called, a good deal of wood to bring down in 30 days.

Three feet thick, the bark was, but like a sponge, and the blade bit it free in henna chunks, and then the cambium layer went, showing the alburnum, after which the going got harder. In a week, though, there was a knee-deep rut in the chips about the tree, and in two weeks, the hole appeared to rear up from a pit of old-rose smithereens: the man himself was out of sight. All day and part of each night, flakes of history flew, and time ran backward as the evergreen's time ran out. Oolong steeped in Boston Bay, and the Maid became a saint on a spit. John signed a screed in a Surrey meadow, a Crusade began and failed, and heartwood grown when Rome was sacked scaled through the air. The wafer was taken by Constantine, and seven miles from Naples, a spew of cinders, stone, and ash. . . .

The tree went down as the fourth week ended, crown, trunk, butt, and all. At the core of the stump, a sliver was left, a spicule as old as the Calvary cross. In a moment, the man would break it off and use it to pick his teeth.





Susan Friedman

the store

CHARLES JONES

ELDERLY SHE RISES there above the floodplain of the creek. Since she has been there, her skirts have been dry. At one time, closer to the creek, she was up to her knees in water every winter. Her appearance is deceptive, though, for she is a building less than 50 years old, anchored like a ship defying time and tides, going back fewer years than her looks, and forward not at all. For which we are thankful.

At the front of the building there are three lanterns in arched niches at the top. Below, the windows are arched stucco with colored tiles, and the roof is aged orange tile. Certain architects might guess late twenties or early thirties and would be right if they settled on 1930. That was the year Peterson and Alford, General Merchandise, was rebuilt. It had been there for 50 years before fire, that great shaper of small histories, had burned it away. This was not the first removal, for the place was itself a successor to Levy's and The People's Store down on the banks of the creek.

Today, though, it will surprise you, this store. Even if you were good all year long, Christmas would not treat you so well. On your left as you enter, the candy rack savors your memory, makes your kids hungry but puzzled. Candies without wrappers? Two cents? They give way a little more every year to packaged little plastics. To your right is, could it be, a bar? Get anything you want, as long as it is a drink, not a cocktail.

On the floor between the sweets and the bar, you may survey the stoves. The cast-iron eternal fades every year in favor of burn-through-in-your-lifetime-but-hot models. It is a matter of what is to be got from suppliers of

oldtime hardware wholesalers going out of business.

In the store you may find, at nine of ten in the morning on a weekday, a few Old Timers picking up the newspaper and having an early beer or brandy. If there are enough there, a quorum is declared and business begins. It concerns the day's news, the latest horse show, the state of socialism in the fifties, the principles of weather—especially of fog, and what is growing well.

Beyond the bar, the food begins, right and left. My taste leads me always to the big glass cheese box, filled with jack, teleme, cheddar, swiss, bleu, all blocks and bricks and rounds. Once the box is open, there is no retreat. Around the cheeses, you find produce and links of salami, breads, jars and jars of pickles and peppers, pig's feet and relish, lupini beans and menudo, all keyed to resident and passing gourmets.

Eric is behind the counter, usually tending bar and telling one tale or another about the place, the people, his days in France and England in World War I. You think he was surely young to have been there then, about 65 or 70 now, you'd say. But no, he will tell the truth—83 next May, working on his feet five days a week. His great joy in life is simply people. He will ask where you are from, what you do, introduce you to the folks next to you, ask you just exactly how you want your drink.

Looking out from behind the bar beyond the sweets and stoves and food, above the oiled wood floors, the ceiling towers over you, covered, as the walls are, with the patina of old ivory. Ancient ads are tacked over the paint. They speak for Lee and Levi and for Fuller Paints. In the paint ad, a boy sits next to his dog. For some reason,

the boy is speaking into a can-and-string phone saying, "Yes ma-am, they last." Under these signs the clothes and boots and utensils await the gaze of everybody with a feel for reality. Exquisite kerosene lanterns sit next to a butter churn on a shelf above sturdy stoneware, 20-cup campfire coffee pots, water ladles, flyswatters made of metal screen, cast-iron cookware, hairpins and suspenders.

Buying or not, this is a wanderer's store. As in hunting mushrooms, you must get an eye for a certain kind of seeing, in this case for corners and odd crevices. Such an eye just may turn up, say, a fedora from the forties, still in its box; a special kind of thread not made anymore; or a shirt ten years old, still imprisoned in its pins. Barefoot young and corseted old folk stalk the aisles, where they read, "Please, no food or drinks in this area," "Please do not unpin shirts," and "Bare feet at your own risk." This, the clothes department, is carefully watched for flatlanders who would shoplift, like the man who left his boots in a new-boot box and wore the new ones out—but not very far. He did not count on the eyes of Beth, Eric's wife, their daughter Nancy, and Bob and Hazel, who are the Petersons of the store's name, Bob being Eric's nephew. Of course the store is known simply as "the store," for there is no other one.

Weekends are madness, and some locals will not go, not after noon. The main aisles look like Wall Street at lunch hour, a mass of people moving in and out. Petersons and Alford's are everywhere, waiting on, watching, and smiling at the crowd, which never seems to be noisy but always in a hurry. A solid peace is kept, always.

For those who stop and can see, the obvious bounty of the place is that peace and an ambience of age. For those who live near it, the store has more to celebrate in its present and future. After all, here is a store where people are living a way of life, not just working at jobs. Here is an actual place where you can buy clothes that last, basic food, hardware that never wears out, equipment that works, a good and honest drink of whiskey, all in the same place.

Charles Jones has painted a portrait of rural California, of "Coming home to a place I had never been before . . ." in his recently published Sierra Club book A Separate Place.

Of Poison, Man, and Indifference to Life

NANCY BUDER



Peter Ogilvie

NOT LONG AFTER moving to Maryland's Little Elk Valley in 1967, Dr. Petro U. Capurro and his family began to fall ill with increasing frequency, exhibiting strange symptoms that Dr. Capurro, a pathologist and toxicologist, suspected were connected with the activities of a local chemical plant. So he set out to discover just how widespread these symptoms were among the people in the valley. He learned that 12 of the 43 residents were hospitalized from 1967 to 1970, showing signs of damage to the pancreas, liver, or kidneys. Seven of the eight residents he examined personally also showed malfunctions of the liver and pancreas.

The Galaxy Chemical Company, the only industry in the valley, has been the center of controversy among local residents since 1961, when it began to reprocess solvents in its local plant. The company uses a distillation process to purify more than 20 different solvents, most of which are deadly in high concentrations. One of these—benzene—is known to inhibit the production of red blood cells and to cause leukemia. Others can damage the liver, kidneys, pancreas, and central nervous system. In the course of his investigation, Dr. Capurro identified more than 25 of these solvents in the air and water of the valley. He reported in *Medical World News* that he had found nine of these solvents in blood samples from various valley residents. The nine solvents were benzene, carbon tetrachloride, methyl chloride, methylene chloride, methyl ethyl ketone, methyl isobutyl ketone, tetrachloroethane, and toluene.

Most of the solvents processed by Galaxy contain an unknown number of impurities that are discarded as wastes. No one—not even company officials—knows what all the impurities are. (The state of Maryland has taken samples of the wastes, but has been unable to determine their precise contents.) These wastes are illegally dumped in a nearby sand-and-gravel quarry because Galaxy does not have the dumping license required by the state. Residents of the community have continually complained to the county health authorities about odors emanating from the quarry. In April, 1973, it caught fire, and fumes from the burning chemicals were dispersed throughout the valley. After the fire, the residents' complaints and health problems greatly increased.

Previously, the state of Maryland had ordered the plant shut down because of air- and water-pollution violations. During investigations in 1970, the state had discovered abnormally high amounts of methylene chloride, benzene, methyl ethyl ketone, and other solvents in the valley air, thus confirming Dr. Capurro's findings. The state forced Galaxy to eliminate its open evaporating ponds, but residents of Little Elk Valley still suffer from the pollution. They must rely on wells for water that the EPA has determined is contaminated. The valley's air is so polluted that some parents will not allow their children to play outside because the fumes make them act "dopey." As one mother recently explained to a reporter from the *Baltimore Sun*, "We'd have to house ourselves up like bears and hibernate." Looking outside, she went on to say that she could "see a blue fog settling through here laying right close to the ground—or yellow, it would get real yellow looking."

The workers in the Galaxy plant, of course, receive even stronger doses. One employee explained that while working closely with the chemicals, he did not notice any odor, but that as soon as he would go outside, he would faint. This man lost 20 pounds while working at the plant. He told the *Baltimore Sun*: "I didn't eat much—when you work around it, you just don't eat."

One woman explained that she and her 20-year-old daughter had been diagnosed by Dr. Eloise Kailin, an allergenist and specialist in environmental medicine serving as a consultant to the state, as having contracted epilepsy from exposure to chemical fumes. Dr. Kailin also found that the woman's husband and son were suffering from pancreatitis. Upon examining the valley residents, Dr. Kailin found a total of 11 cases of pancreatitis, an incidence of 45 per thousand, as compared to the rate of two per thousand in the rest of the surrounding area. "When I put together all of the information made available to me," Dr. Kailin told the *Baltimore Sun*, "it adds up to proof beyond any reasonable doubt that fumes from the Galaxy plant have caused and are continuing to cause an epidemic in Little Elk Valley."

Even more alarming, though more difficult to substantiate, is the unusually high incidence of cancer in the

valley. Dr. Capurro determined that from 1967 to 1973, there were 15 deaths among the 120 people who, by his estimate, had lived in the valley for at least two years—a death rate 2.2 times higher than that of Cecil County as a whole. Of those deaths, eight were attributed to cancer—a rate seven times greater than that for the county. But as persuasive as these figures seem to be, the case is difficult to substantiate because by the end of 1973, more than 60 percent of the people living in the area between 1968 and 1970 had either moved away or died.

John Madison worked at the plant several years ago, but had to quit because he could not tolerate the fumes. He explained to the *Baltimore Sun*: "I got headaches from it. I had them all the time." Madison's father had been a supervisor at the Galaxy plant for 11 years prior to his death from cancer last August. He died of throat cancer. His widow described the odors on her husband's clothes as being so strong that he had to change his working clothes before coming into their home. John Madison's family suffers from chronic sore throats. Along with many residents of the valley, the Madisons can take no more pollution. They are planning to move.

LITTLE ELK VALLEY provides an extreme case of the threat to human health and environmental quality posed by the careless or mindless disposal of hazardous substances. But we must not mislead ourselves into thinking such instances are unique. We are all, in some degree, in the position of the valley residents, for the entire country—if not to say the world itself—has been repeatedly exposed in the past century to a staggering variety of toxic substances. Industrial society has routinely trafficked in poison, and we are beginning to pay the price. The common wastes of home and industry have become a greater threat to human safety and environmental quality than anyone could have foreseen. Even our best attempts to contain many of these toxic substances have proven futile, not to mention the appalling number of occasions when few if any precautions were taken. Not only is the

Nancy Buder is a consultant to the Sierra Club on solid waste management. She is working under a grant from the Environmental Protection Agency.

production of hazardous wastes continuing, now increasing by some five to ten percent annually, but the wastes of past generations—wastes assumed to be long buried—are returning to plague us.

The practice of burying toxic substances in the ground on the assumption they would eventually decompose into natural elements and remain permanently as benign constituents of the soil has proven disastrously wrong in many communities. For example, a large municipal landfill in the state of Delaware, where both domestic and industrial wastes had been buried for many years, was closed in 1968, and its contents forgotten. Four years later, it was discovered that chemical and biological pollutants had percolated into the local groundwater. The Environmental Protection Agency estimates that some \$26 million will be required to correct this dangerous situation and to stop further deterioration of an underground aquifer that provides drinking water to over 40,000 people.

A Sierra Club Conference on solid waste management was held on Saturday and Sunday the 16th and 17th of November, in Washington, D.C. The conference is the final part of an Environmental Protection Agency training grant given to the Sierra Club to study the various aspects of solid waste management. The thrust of the conference will be to develop a conservation attitude toward the existing economic, energy, materials, and land-use policies to provide guidelines for solid waste management, and thereby reduce the existing environmental degradation to the land, air and water.

Although past attempts to secure federal legislation to regulate the disposal of toxic substances have failed, a new effort will begin on November 18, when the panel on materials policy of the Senate Committee on Public Works, chaired by Senator Jennings Randolph (Democrat, West Virginia), will consider the Solid Waste Utilization Bill of 1974, which will include provisions regulating toxic wastes as well as solid waste in general.

The kindred practice of confining certain wastes to holding ponds has proven just as unreliable. In too many cases, the pond has held little beyond our hopes. For example, since the 1940's, a New York electroplating firm has been discharging its wastewater into what it considered to be safe settling ponds. Even though the ponds were well constructed, they lacked protective linings. As a result, seepage of toxic cadmium and chromium has contaminated the local groundwater. This case also points up the distressing fact that even the expenditure of huge amounts of money may not eliminate the hazards posed by latent toxic substances. Since 1958, considerable sums have been spent on the chemical treatment of this wastewater—all in vain.

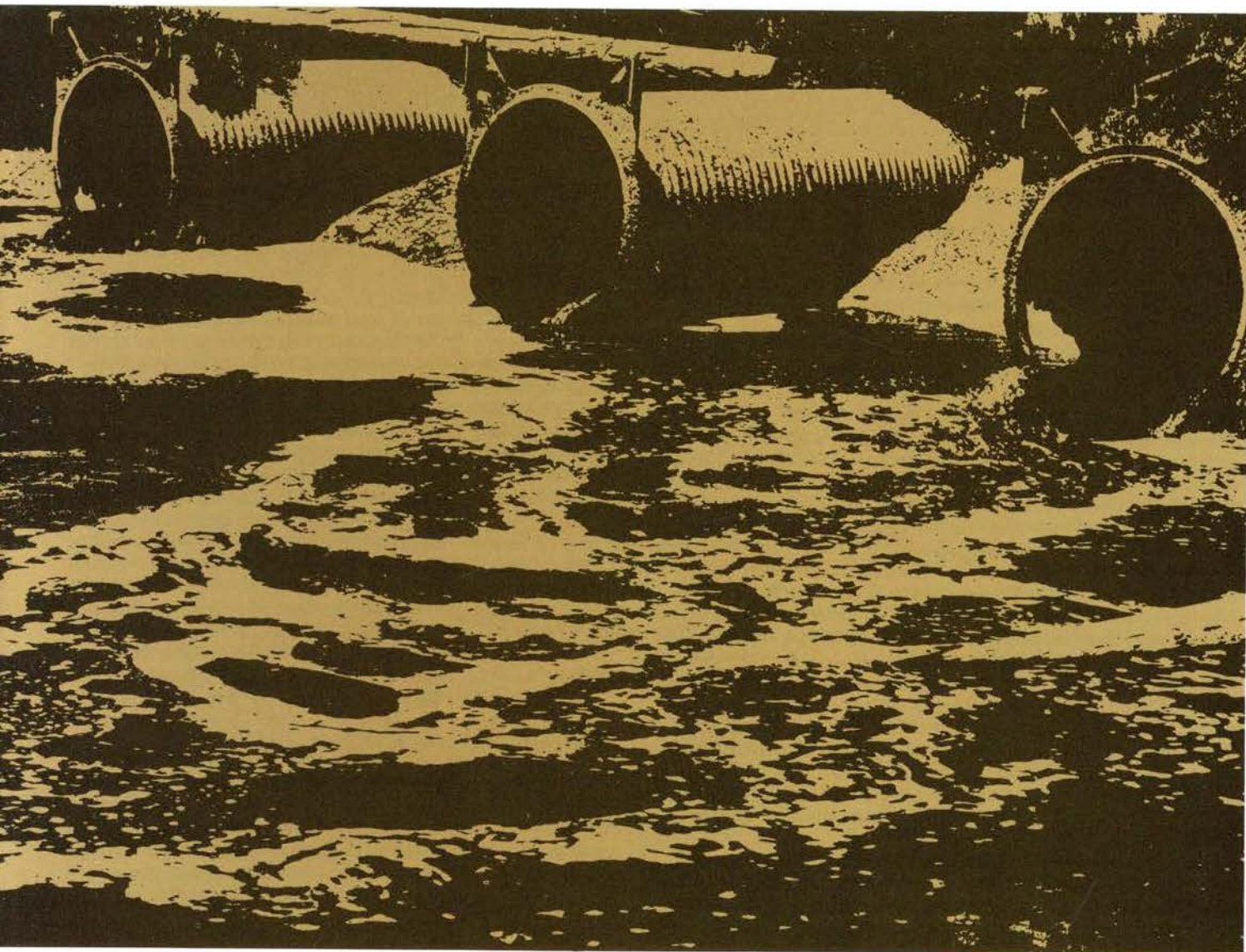
Nor is groundwater the only final receptacle of our wastes. In Tennessee, for example, a chemical company had buried a hundred 55-gallon drums of chlorinated hydrocarbons each week in shallow, unlined trenches. These poisons regularly escaped from their containers to contaminate not only the local groundwater supply, but a nearby creek as well. Our air may also become the unfortunate destination of migrating wastes, as is demonstrated by the hexachlorobenzene mystery of Geismar, Louisiana. Hexachlorobenzene, along with other benzene derivatives, is noted for its carcinogenic properties. So when the U.S. Department of Agriculture discovered that unusually high levels of the substance had accumulated in the fatty tissues of local cattle, it placed the entire herd, numbering some 20,000, under quarantine. Otherwise, the chemical could well have been passed on to the unsuspecting consumer. It turned out that one of the many chemical plants in the area, following a practice common to all, had dumped its hexachlorobenzene wastes on adjacent land, assuming they would remain intact until they could be properly treated. But weather conditions caused the hexachlorobenzene to evaporate into the atmosphere, from whence it proceeded to settle with the morning dew on nearby pastures, where it was ingested by the grazing cattle.

Substances such as hexachlorobenzene and the host of solvents emanating from the Galaxy Chemical Company are relatively new arrivals in the world. They were created in the re-

torts of modern science in an age when "progress through chemistry" seemed not only promising, but inevitable. We may regret our foolishness in so cavalierly handling these exotic substances, in blithely assuming that the miracle of modern chemistry was entirely benign, but at the same time we can understand, perhaps, how it was that we failed to recognize the deadly aspect of these new substances. It is far more difficult to understand our similar casualness with such naturally occurring poisons as arsenic, surely one of the most notorious poisons in history. This ubiquitous element is present in low concentrations in sea water and in somewhat higher concentrations in carbonate springs and highly saline water. Arsenic is also naturally present in the soil, although the concentration increases greatly with the use of pesticides. It is generally claimed that arsenic will tend to remain in the topsoil, predominantly in an oxidized pentavalent state that presents virtually no danger to well water or plant growth.

Because it is a naturally occurring element in our soil and water, we long believed that if buried in the ground, even arsenic would eventually be rendered harmless. Today, we know differently, we know that this element will remain indefinitely and reappear to infest later generations. For example, in the late 1930's, a pesticide containing arsenic was buried in western Minnesota. Thirty years later, a building contractor expanded his facilities by building a warehouse and office outside the city of Perham. A well was drilled for his water supply. Almost immediately, workers developed symptoms of arsenic poisoning. According to a study conducted by Dr. Edward J. Feinglass, 11 of the 13 employees suffered from symptoms of chronic (subacute) arsenic intoxication. More acute reactions were confined to those who had ingested especially large quantities of the water. The distinction between chronic and acute poisoning is significant. An acute case will draw immediate attention, whereas chronic poisoning may only produce an irritation that is tolerable for many years. It is now believed that chronic arsenic poisoning may lead to cancer.

The exact source of contamination in Perham was difficult to determine. When an investigation began, several possibilities for groundwater degrad-



Susan Landor

ation were found. In interviews with local residents, for example, it was discovered that in the late 1930's, when grasshoppers threatened farmers' crops, bait composed of arsenic, bran, and sawdust—a mixture not unlike old-fashioned garden snail bait—was stored in piles on the bare ground until needed. The excess bait was supposedly buried. Perhaps it was the grasshopper bait that contaminated the groundwater, perhaps it was the buried arsenic pesticide, or perhaps it was something else altogether. But in any case, here we find a clear instance where our carelessness cannot merely be explained away by ignorance.

We would be fortunate indeed if all we had to do in order to solve the problem of hazardous wastes was to, say, shut down a chemical company, or restrict the uses of certain substances, or regulate how such sub-

stances are handled and disposed. Such steps are necessary, and we should do whatever possible to assure that they are taken at once, but unfortunately, the problem is far too complex to be so easily solved. The example of Perham, Minnesota, suggests that no simple, easy-to-swallow remedy is going to cure this particular illness. The farmers were not poisoned by industry, as were the residents of Little Elk Valley, nor did they—obviously—poison themselves by choice. But neither do any of us intentionally poison ourselves. Yet, in effect, we do so all the time. We have become hooked on a whole array of poisons, and a major shift in our lifestyles will ultimately be necessary if we are to escape further intoxication. Hundreds of household items—nylon stockings, paints, synthetic fabrics, pesticides, floor polishes, solvents,

cleaners, detergents—are either poisonous themselves to some degree, or rely on poisons for some aspect of their production. Like the farmers of Perham, we have all become so accustomed to these and similar materials that we have grown careless, or even apathetic about the consequences of using them. And as shown by the example of arsenic, we need not die at once in order to be counted among their victims. Like the residents of Little Elk Valley, we may simply begin to suffer inexplicably from an assortment of ailments whose origins we may never suspect. The passage and enforcement of legislation to regulate strictly the production, availability, and disposal of hazardous wastes is vital to the good health of both people and their environment, but ultimately the people themselves may have to break the poison habit altogether.

insider... news of the members and their club

THE SIERRA WATCH

The Subject Was Money

IT IS TIME for some plain talk about money, the Sierra Club, its budget, and what you as an individual member can do about it all. On October 13, 1974, the Sierra Club's Board of Directors completed its annual travail of hammering out a budget for the fiscal year ending September 30, 1975. This observer at the sessions of the board and its executive committee—first over the Labor Day weekend and then a month or so later—was convinced that the club's staff, the board's 15 members, and its budget committee had succeeded in performing one of the most delicate fiscal operations in the history of the club. They somehow found ways to provide the Sierra Club with the means to accomplish its goals in this critical period of intensified pressures on the environment during a recession that was reducing its income, and during an inflation that was increasing expenses.

How the staff, the committee, and the directors worked, wiggled, and maneuvered to devise a budget that has a chance to see the club safely through the next fiscal year is a tale of long hours of painstaking labor by many dedicated people. The first draft of the budget was compiled on the basis of opinions received from all sections of the club. Committee chairpersons, field representatives—those individuals in charge of club programs—all submitted their judicious estimates of what funds they would need for fiscal '75. The total came to \$4,791,500. When the board finally approved the final revision on the third draft, the revenue side of the budget had been increased by \$196,000 and the expenses side reduced by \$226,000 (down to a total of \$4,564,900). Thus the first-draft deficit of \$429,000 had been shrunk to a more comfortable \$6,400.

And that wasn't all. In the process, a call for an increase in dues had been avoided, a \$30,000 unallocated reserve for emergency use was established, and a first major step toward strengthening the club's financial structure was taken. Income from investments no longer will be used to meet general expenses, but will be reinvested to build up a separate \$600,000 capital fund for use as collateral (in place of the club's permanent fund) in any future borrowings.

A Switch for the *Bulletin*

Despite the double-digit inflationary climate, the year-to-year rise in final 1975 budgeted expenses was held to a single-digit six per cent. In the face of soaring prices for supplies, materials, and services, various economies and more efficient practices have kept total costs in check. With the spectacular climb in paper prices especially, the *Sierra Club Bulletin* is considering a switch to a different format and schedule: four quarterly 48-page magazines (of which one would be combined with the annual outings issue) and six 24-page newsprint tabloids. Such a change could cut yearly production costs by as much as \$35,000.

Ways to boost the income side of the budget equation proved more difficult. With their eyes on the gathering clouds of recession, both the club's controller, DAVE HARRIS, and the club's treasurer and chairman of the directors' budget committee, PAUL SWATEK, exercised extraordinary caution in predicting revenues. Expected *Bulletin* advertising income, for instance, was cut realistically by \$10,000. Income from dues and admission fees was put at \$1,840,000 based on a conservatively estimated 2.5 percent membership growth rate. Thus, most of the \$319,000 increase from the 1973-74 revenue budget is attributable to so-called dedicated funds, in the form of special grants from foundations or other donors, to be used solely to fund particular club projects or programs. Two examples are the \$75,000 for the International Projects and \$73,700 for the 1975 Wilderness Conference, to be held in New York City in June.

Increase the Dues?

The possibility of augmenting revenue via a dues increase had been raised at the Labor Day weekend board meeting. The question was referred to the Sierra Club Council in order to find out what the club's 45 chapters thought about it and for the council's own recommendations, if any. In October, the council voted, 23-19, against putting such a proposal on the April ballot for a club-wide membership referendum, a step necessary for any change in the regular dues schedule. The club's membership committee also advised against any move now for a dues increase, on several grounds: too little advance notice and discussion; danger of antagonizing and losing present members; an additional financial barrier to the recruiting of members. It was pointed out that in the four years preceding the last dues increase (\$12 to \$15 on July 1, 1971) membership had ballooned from 55,681 to 131,630, with annual growth rates varying from 17.7 to 32.3 percent. In the three years after the dues hike, however, membership rose to 144,263 at annual rates of from 2.2 to 3.7 percent. The committee's consensus was that increasing membership was fully as important as increasing revenue, and that a dues boost might wind up with a decline in both members and revenues. The committee has been charged with reviewing the dues structure and reporting back at the next board meeting in December.

'71 Dollars for a '75 Job

Summing up at the end of the final budget session, Director BILL FUTRELL said that he thought everyone had done a "damned good job" in using 1971 dollars to fund a vastly expanded Sierra Club program at 1975 costs. Those 15 1971-dues dollars can buy only 150 first-class postage stamps today; four years ago they could buy 250 of them. So what can an individual member do to ease the inflation crunch on the club's finances? Not very much to reduce its expenses. On the revenue side of the budget, however, there are a number of possibilities:

1. Sign up new members and dissuade present members from becoming club dropouts.
2. Help your chapter or group to tap local sources for the financing of special projects and also help develop new ways of raising money to support regular activities.
3. Respond now to the President's Fund Appeal mentioned elsewhere in this Bulletin. You may give directly to the Sierra Club, to the Sierra Club Foundation or to the Sierra Club Legal Defense Fund. Non-deductible gifts are especially welcome. Meeting the adopted budget will depend partly on an additional \$227,000 of non-deductible gifts this year directly to the Club, as well as on a generous response to both the Foundation and to the Legal Defense Fund on a deductible basis.

A final plea. When your dues renewal form arrives, take an extra moment or two for some soul- and purse-searching. Think about your priorities in life. Does the strength of the Sierra Club rank as high on your value scale as, say, one night out on the town? Perhaps you can afford to add at least enough to your 15 or whatever 1971 dues dollars to pay for those 100 postage stamps. Maybe in all fairness to you and yours you can't. It is possible that stagflation has hit you worse than it has the Sierra Club. I hope not.

BULLETIN BOARD

Can You Draw?

If you can, and if you want to help the cause—for fame but not fortune—get in touch with WENDY PETTIGREW, Information Services, at Mills Tower. She needs pen-and-ink and pencil line drawings of animals, plants, and other objects of nature for the *Children's Notebook* and for a planned series of fact sheets.

Independence Reconsidered

Time and Opportunity

A FUNNY THING happened on the way to Independence, and federal energy policy will never be the same. It will certainly never again be headed for the disaster that seemed so inevitable a few months ago.

It was more than a century ago when the westward movement came to an abrupt end against the waves of the Pacific. It has taken that full century for us to come to grips with the fact that our resources are finite and vanishing fast, and that we will have to live within them for a long, long time while the waves continue to pound ashore.

As the former President paces those same beaches, his version of "Project Independence"—complete freeing of the US from foreign oil sources by 1980—has faded like footprints in the sand. But far more significant changes in our outlook on energy have taken place as well. There is a profound questioning of the assumptions that led to our misshapen vision of only a few months ago.

At first, the Sierra Club looked on the impending set of "Project Independence" hearings with a great deal of skepticism. They were viewed as window dressing for decisions already made within the administration—stripmined western coal; ten million acres a year of offshore oil; gutting the Clean Air Act; speedy deployment of nuclear reactors; and rapid development of oil shale, the breeder reactor, and synthetic fuels. Energy conservation was scarcely given even lip service.

After considerable discussion among members of the club's energy policy committee and the staff, it was concluded that the Sierra Club should make a major effort to participate in the ten key hearings. Such participation, it was felt, might provide an opportunity to publicize the club's views through media coverage, serve an educational function for those present at the hearings, help to emphasize the importance of the state and regional stake in critical energy decisions, and help establish a consensus among club members. Moreover, there was always a chance that we might actually succeed in influencing some decisions.

In all, some 32 oral presentations were made by club spokesmen, encompassing a total of eight hours of testimony and 250 pages of text. For the most part, the club was able to get good slots for our presentations, and our statements were generally well received.

In the six months since the hearings were

first announced, there have been the first signs of shifts in the administration's position. A number of factors account for these shifts, not the least of which was the change in White House personnel. Moreover, the worsening economic situation has been an ally in precluding huge federal subsidies for energy projects, causing still greater questioning of basic policies, and providing a further rationale for the need to conserve energy. Finally, key foreign policy advisors within the administration have come to see energy conservation as the only immediately workable tool to lessen dependence on foreign oil sources and to coax lower oil prices—or at least no new price increases—from OPEC.

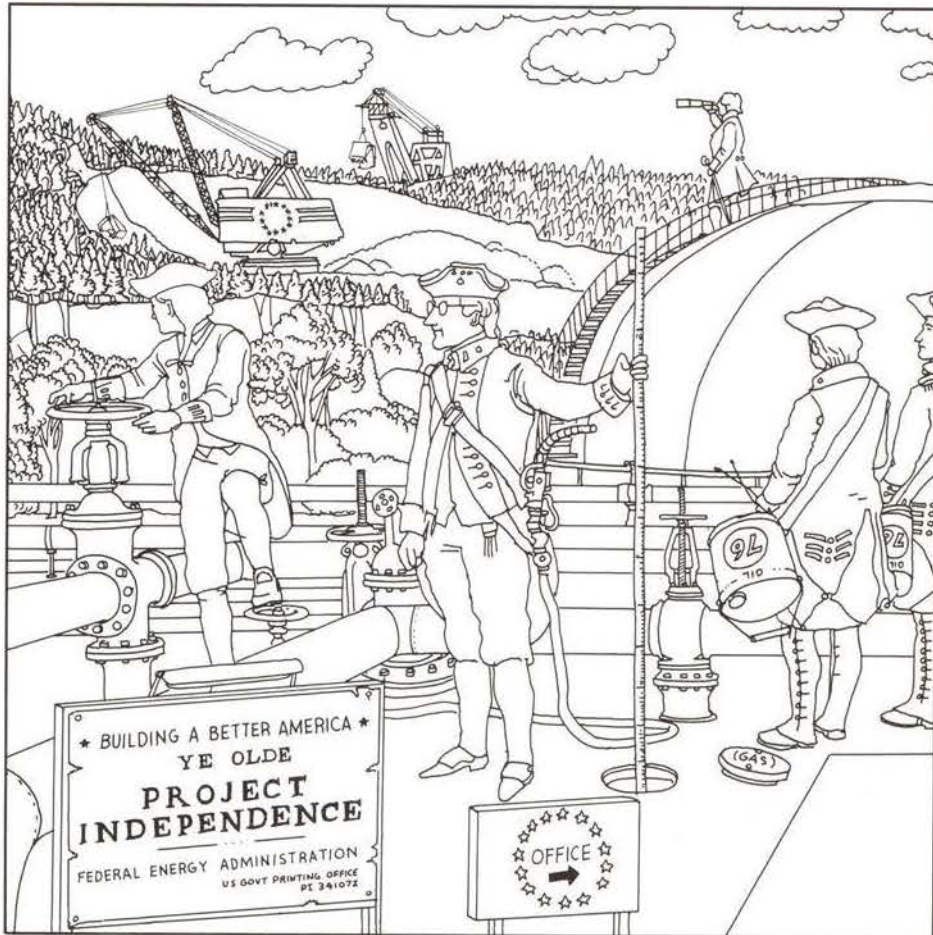
What are the changes that have come about?

First, the "Project Independence Blueprint" to be made public on November 1st is

no longer to be a set of immutable decisions, but rather a discussion document outlining policy options. (In part, this is because the administration feared getting entangled in a lengthy and complex series of confrontations over the legal requirement for environmental impact statements on proposed projects.)

Second, administration officials now generally admit that true independence is a practical, even philosophical, impossibility. FEA officials admit that the price in economic and in environmental terms would have been too high. Nearly everyone agrees that last year's "energy crisis" is really a much longer-term problem that defies easy, one-shot answers.

Third, energy conservation and solar energy are now taken fairly seriously, and FEA's first draft document on the former could provide the basis of sweeping legisla-



tive and administrative changes—when Congress and the administration find the courage to act on them.

Unfortunately, however, the legacy of implicit decisions already made still lingers with frightening potential consequences, and our task is hardly over. After commenting on the "Blueprint" when it is issued and participating in a promised wind-up hearing to be held in Washington, D.C., attention will again turn toward influencing administration decisions concerning western coal and offshore oil, and getting what we need from Congress, not the least of which will be meaningful energy conservation legislation.

Yet, there is change, and if the club has not brought it about alone, it has certainly been in the right place at the right time saying the right things. President Ford now talks about energy conservation. Treasury Secretary Simon has stated his support for phasing out the depletion allowance. FEA Administrator Sawhill voices strong reservations about subsidizing synthetic-fuel pro-

grams. The oil companies have proved to be less than enthusiastic about oil shale. The breeder reactor program is in serious trouble, and the tempo of public criticism of nuclear power increases steadily.

Moreover, utilities now plan to cut back some 18 percent in their construction plans, cuts achieved in large measure by trimming their most expensive and unreliable plants, the nuclear ones. These cuts are being made, they say, not only because of increased costs, but because *less demand is now expected*.

Like a swimmer suddenly tossed ashore by an unexpectedly large wave, we have been granted a reprieve. We must keep talking and working. As Sierra Club President Kent Gill said at the Houston hearing, "We should not carry out policies with a sense of being harassed by circumstances, drive to continue uncritically the practices of the past, to reduplicate the excesses of the present. We do have time, and opportunity and abilities to plan for a reasonable tomorrow."

The ocean will not always be so lenient.
Gene Coan

The Skagit River Valley and the Power of Power

Thirty-three years ago, in 1941, the city of Seattle applied to the International Joint Commission for approval to flood large areas of both the Canadian Skagit River Valley and what is now part of the North Cascades National Park and Recreation Area. Much of these areas would be submerged under 125 feet of water. This flooding was anticipated if the top of Ross Dam, which is located on that portion of the Skagit River in the U.S., were to be raised from its present elevation of 1,615 feet to 1,733 feet in order to generate a mere 271,000 kilowatts of additional peak power for Seattle City Light, an amount that now would supply Seattle's power needs for only two to three years. After that, still other sources of power would have to be found.

Seven years ago, in 1967, the Province of British Columbia formally agreed to allow Ross Reservoir to be raised by 125 feet behind High Ross Dam, which would have 6,350 acres of B.C. land in exchange for an annual payment by Seattle of \$5.50 per acre for 99 years. Today, however, both the provincial government of B.C. and the national government of Canada are opposed to the flooding of Canadian Crown lands by an enlarged Ross Reservoir. Most recently, the province and the city of Seattle have exchanged correspondence expressing willingness to explore means of reaching a compromise proposal to stop the High Ross Dam project.

On August 9, 1974, Robert Williams, B.C.

Minister of Lands, Forests and Water Resources, wrote Seattle Mayor Wes Uhlman that "... termination of the project would be in everyone's interest. I welcome your willingness in this regard, and extend to you my own. It is my deepest hope that we might thereby arrive at an acceptable settlement to place before the IJC." Minister Williams offered a three-point proposal: (1) that B.C. repurchase the 1967 agreement at its present value to Seattle, (2) that recreational and wilderness area plans across the international border be coordinated to establish an international recreation area comprised of the new B.C. Skagit Valley Provincial Park and the U.S. Ross Lake National Recreation Area, and (3) that B.C. supply Seattle with energy that would have been available if Ross Dam had been raised. Mayor Uhlman replied, on September 11, that "... it would seem desirable to explore mutually the technical feasibility of the suggestions put forth in your letter. . . ."

The Province of B.C., however, on June 27, 1974, had already requested the IJC to dismiss Seattle's 1941 application, to rescind the IJC's 1942 approval, and to declare the 1967 agreement invalid as a consequence of a series of legal violations.

Seattle City Light, however, stubbornly continues to expend enormous sums and a great deal of effort in pursuing the High Ross Dam project, in spite of opposition by government officials and citizens of Canada and the United States. On May 31, 1974,

John C. Whitaker, Undersecretary of the U.S. Department of the Interior, advised the Federal Power Commission that "... the Department of the Interior opposes the issuance of the license amendment under consideration, and recommends that the applicant pursue alternatives for the production of electrical energy by methods that would not adversely impact fish and wildlife." On July 28, 1974, three B.C. cabinet ministers demonstrated their government's opposition to the High Ross Dam project. Recreation Minister Jack Radford, Resources Minister Bob Williams, and Public Works Minister Bill Hartley dedicated the 92,000-acre B.C. Skagit Valley recreation area, including land that would be flooded by High Ross Dam. The Superintendent of the North Cascades National Park, Lowell White, was present, representing the Department of Interior's opposition to High Ross Dam. After the dedication, the ministers and several hundred Canadian and U.S. citizens attended the First Annual International Skagit River Canoe-In and Picnic, just north of the U.S.-Canadian border.

Meanwhile, a legal battle is being waged before the FPC over Seattle Light's 1970 FPC application for permission to raise Ross Dam. The intervenors opposing this application are the North Cascades Conservation Council, on behalf of the Sierra Club and seven other national and local conservation organizations, the ROSS (Run Out Skagit Spoilers) Committee, on behalf of Canadian conservationists, and the state of Washington's departments of ecology and fisheries. FPC judge Allen C. Lande has conducted one week of public hearings in Seattle and Bellingham, Washington, one week of legal proceedings in Seattle, and ten weeks of legal proceedings in Washington, D.C., for a total of 47 days through August 1974. An additional three weeks of such proceedings are expected in October and November. The testimony of 52 witnesses (22 for Seattle City Light, 12 for FPC staff, 10 for ROSS, 5 for North Cascades Conservation Council, and 3 for Washington State) has been recorded on over 7,000 pages in 47 volumes

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of transcript and 280 exhibits. Seattle City Light has, thus far, spent \$3.5 million on environmental and recreational studies, engineering consultation, lawyers, and preparations to support their FPC application. By contrast, the North Cascades Conservation Council, with some aid from the Sierra Club, has spent only \$3,500 so far.

While everyone except Seattle City Light seems certain that High Ross Dam will never be built, the costly, time-consuming legal battle goes on. At the conclusion of the FPC cross-examination hearings, all parties will prepare rebuttal testimony and then

enter into another series of cross-examinations. Judge Lande will then render an opinion to the Federal Power Commission, which it could accept, reject, or return for further justification. Concurrently, the city of Seattle and the Province of British Columbia will be conferring on how to refer authorization of the project to the International Joint Commission, which, if successful, would probably result in delaying further FPC action, pending the outcome of IJC findings. Either way, High Ross Dam seems destined for a slow execution.

Patrick D. Goldsworthy

WASHINGTON REPORT

Two Roads North

Brock Evans

IN OCTOBER, I toured the controversial Alaska Pipeline as a member of the Arctic Environmental Council, a privately funded group composed of individuals representing various environmental organizations. The Alaska Pipeline is bringing great changes to the Great Land, and the pattern now being set here will affect all future efforts to protect the Alaskan wilderness from similar exploitation.

As we traveled, the vastness and magnificence of Alaska overwhelmed us, as it has almost every visitor. But then, so too did the size and scope of the pipeline project itself, though in a far different way. The massive equipment, the constant roar of engines, the mountainsides being cut away, the enormous gravel beds stretching away across the tundra—in the presence of this monumental enterprise, one feels an excitement hanging thick in the air, as if one were back in the days of the Gold Rush, a feverish anticipation that pervades even the attitudes of those charged with overseeing environmental restrictions. This is not to say that everyone here is overcome by pipeline fever to the extent of being blind to all else. We did see, for example, a great deal of effort even on the part of the Alyeska Pipeline Company to obey the stipulations laid down by the government. Fish-spawning beds were being avoided; workmen were not allowed to run bulldozers across the tundra. There are violations of regulation to be sure, but it seems that sincere efforts are being made.

The biggest problem, however, comes from the very method of construction being used—laying alternative sections of buried and elevated pipe—which is much more damaging than some of the more modern options that were presented to Congress during the pipeline debate. The chosen method requires that enormous amounts of gravel obtained from mountainsides or river-beds be used to lay down a “work pad” extending nearly the entire length of the line,

over which heavy equipment can move back and forth to lay the pipe. Sixty-five feet wide and at least two feet thick, this gravel pad is, in effect, a road. It will be there virtually forever.

But, there will also be *another* road—an Alaska State “Scenic Highway to the Arctic.” This road is also being built right now and promises to be the most damaging single feature of the entire pipeline corridor. Its effects will be permanent. This “scenic highway” raises questions of enormous significance to the future of the North. Already, bus companies have applied for permits to take tourists up to the Arctic. If the road is ever opened to public use, the wildlife and the feeling of wilderness will be destroyed even more than by the pipeline.

We stopped for lunch in the Brooks Range. Leaving the rest, I wandered down by the Koyukuk River. Following wolf tracks in the snow, I stood along the bank watching the ice freeze up its braided channels. A pale sun gleamed dimly, the wind whistled through the high grass; and the ranges of cold mountains stretched off, toward the distant Yukon.

At that moment I came completely under the spell of the North; and for the first time I understood what Jack London and the others who came before us had written. There is a silence to this vast empty land, a special feeling that comes only from being so far away from people or roads. It is something of the human spirit, touched by ancient memories of what it once must have been like for the entire race so long ago.

I turned to go back, still under the spell. Suddenly, the roar of diesel engines shattered the silence. Big trucks and bulldozers rumbled out onto the road to finish off the afternoon’s work of cutting and scraping and tearing.

What really has happened—even more than the physical damage—is damage to the spirit of this land. This road has broken that

spirit, forever, I thought to myself. This is what has truly been lost. We shall never see its like again. This is the real sadness of what is being done.

Though the loss is irrevocable, we can, at least, do our best to protect the land that remains and to preserve whatever remnant of the wild spirit continues to abide there.

We must insist that environmental regulations be strictly enforced and that all violations be fully disclosed to the public. We must work to see that there is only *one* road along the pipeline, not two; and we should take a careful look at any proposition that would open up the gravel pad to full public use. We must ensure that any future construction for oil or gas employ the latest available technology.

But most important, we must insist upon complete protection of large parts of Alaska in the national park and wildlife refuge systems. The psychology of the North may change; but much magnificent land remains. Bills to protect it will be coming before the Congress, and they deserve our most strenuous efforts. Our past mistakes in Alaska need never recur. The rest of the Great Land can be preserved.

Sierra Club Exhibits

Can we learn to live within the ecological limits of a fragile planet, with problems of overpopulation, pollution, unlimited economic growth? Photographs on *environmental survival* by Jeff Armstrong, Dr. Thomas Barrett, Elihu Blotnick, Frank Gress, Daniel Gridley, James Hansen, Michael Johnson, James Karales, and Al Wengerdt will be displayed at the following locations:

Environmental Education, 800 Highview Drive, Antioch, Illinois. Dates: November 4 to 27

Lassen Community College Media Center, Susanville, California. From November 1 to 30

For the last three years, the Sierra Club has provided photographic exhibits for displays at local Sierra Club and other environmental groups, schools, and community centers throughout the nation. Exhibits are available upon request; participating groups are required to pay for only the return postage of the exhibit. Each of the eight exhibits features a number of large color-print panels and an explanatory caption block. For exhibit information and order forms, contact

Sierra Club Exhibits
1050 Mills Tower
San Francisco, California 94104

CAPITOL NEWS

Environmental actions in Congress

CONGRESS HAS BEEN MAKING some important decisions on environmental issues. The House and Senate compromised their differences and sent to President Ford bills to establish the Big Cypress National Preserve in Florida and the Big Thicket National Preserve in Texas.

The same week, the House Parks and Recreation Subcommittee held hearings on S.820, which would expand the Indiana Dunes National Lakeshore. Sierra Club Midwest Representative Jonathan Ela testified in support of the bill. The subcommittee also favorably reported H.R. 7077 to the full committee. This bill would establish a Cuyahoga Valley National Recreation Area between Cleveland and Akron.

The full House Interior Committee favorably reported a bill to establish the Spessard L. Holland National Seashore in Florida.

The House Parks and Recreation Subcommittee suddenly canceled its scheduled October-8 mark-up of the Hell's Canyon

Bill, S.2233, so that committee members could participate in the rules-committee hearing that day on the Grand Canyon Bill, S.1296. The subcommittee was expected to take up the Hell's Canyon bill in mid-November after the congressional recess.

Meanwhile, the Senate passed and sent to the House S.3022 adding 23 study rivers for possible inclusion in the National Wild and Scenic Rivers System.

Congress deadlocked on strip mine bill

A three-hour night session just before Congress recessed failed to break the House-Senate conference deadlock on the major issue in the strip-mine bill. Still unresolved is the question of whether surface owners whose land is over federally owned coal would be required to give written consent before their lands could be strip-mined. As

the recess began, the majority of Senate conferees did not support that requirement. After November's congressional elections, the conferees are expected to consider funds for deep-mine research and development, along with the possible exclusion of deep-mined coal from the 35¢/ton fee for land reclamation, to provide an incentive to deep mine rather than strip mine.

Congress votes to split nuclear research from power regulation

After being ratified by the House and Senate, the Energy Research and Development Agency bill is at the White House awaiting the president's signature. The bill splits energy research and development from nuclear power regulation, the former to be administered by a six-division research and development agency, and the latter by a nuclear regulatory commission of five members. The conferees rejected an amendment by Senator Edward Kennedy of Massachusetts to grant funds for intervenors in nuclear power plant licensing proceedings, and an amendment by Senator Lee Metcalf of Montana to grant technical assistance to intervenors.

Administration promises new wilderness package

President Ford will soon announce one of the largest packages of wilderness-study proposals ever sent to Congress. This information was conveyed by the Forest Service during the Senate Interior Committee's



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oversight hearings on the wilderness act and its implementation. The final package of wilderness studies under the wilderness act was due before September 3, but was being delayed until the President could personally participate in its announcement, officials told the committee.

Deputy Forest Service Chief Tom Nelson also reported to the committee that detailed studies of the 274 new roadless areas, set aside in 1973, would take 15 to 20 years—during which time the areas would be protected from exploitation.

Sierra Club Northwest Representative Doug Scott urged the committee to resolve the present policy questions that have slowed the committee's action on wilderness proposals—questions such as how to treat submerged lands (should they be designated for wilderness), the compatibility of controlled burning with wilderness, and the treatment of old irrigation ditches or buried pipelines.

Scott referred to the growing backlog of wilderness-study proposals in Congress and urged that these be cleared away soon to make room for other proposals now being formulated, particularly citizen-initiated bills for protection of national forest wilderness areas. Scott referred to the most recent of these bills, S.4066, introduced by Senators Lee Metcalf and Mike Mansfield of Montana, to require study of ten Montana roadless areas not selected for wilderness study by the Forest Service.

Scott stressed the importance of wilderness designation within national parks to strengthen the hand of the park administrators against unwise development proposals.

House gives Havasupai Grand Canyon lands

By a vote of 180-to-147 the United States House of Representatives approved the transfer of 185,000 acres of Grand Canyon National Park and Kaibab National Forest to the Havasupai Indian Tribe. The measure differs from the version passed by the Senate last year in two major respects that will have to be resolved in conference. First, the Senate would only study the possibility of land transfers to the Havasupai Indians. And second, the House bill adds 228,700 acres to the Senate measure, thus enlarging the park to 1,406,500 acres.

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Of the proposed transfer, Sierra Club Washington Office Director Brock Evans said "The precedent established by the transfer of park lands means that henceforth public lands which belong to all the people will be considered available to satisfy anybody's claims against it. This must not be allowed to happen."

NEWS VIEW

Study bursts strippers' bubble

A RECENT GOVERNMENT STUDY reveals a major flaw in the rationale used by the power and coal industries to justify strip mining coal in the Northern Great Plains. They have contended that the so-called "low-sulfur" coal found there could be burned in power plants as far east as Ohio and as far west as the West Coast without the need for controls on sulfur dioxide emissions. They have said that by burning this "low-sulfur" coal, power plants could stay within new-source air-pollution limits. At the same time, they have argued against using sulfur-dioxide scrubbers for pollution control on coal-burning power plants, and have largely based their opposition on the availability of western "low-sulfur" coals.

However, a study done under a U.S. Geological Survey contract to the Montana Bureau of Mines and Geology undercuts this argument. Entitled "Preliminary Report on Coal Drill-Hole Data and Chemical Analyses of Coal Beds in Campbell County, Wyoming," it is now available at U.S.G.S. offices in Menlo Park, California and Denver.

According to the report, western coal is low-sulfur by *weight*, but high-sulfur by *heat-production* standards. That is, it takes more western coal to produce the same amount of heat as an equivalent amount of eastern deep-mined coal, so the low-sulfur-

Observers report there may be enough delay in consideration of the bills so that letters received by conferees through November could have a good effect. Please write your Senators (Senate Office Building, Washington, D.C. 20510) or Congressmen (House Office Building, Washington, D.C. 20515) opposing the land transfer.

per-pound advantage of western coal is more than offset because it takes more of it to produce a desired quantity of heat.

Sierra Club Denver attorney H. Anthony Ruckel said the power industry has asserted that "using low-sulfur coals from the Northern Great Plains without the necessity of scrubbers would save rate-payers considerable money. The industry has pointed out that transportation costs over the great distances necessary did not equal the costs of scrubbers required for higher-sulfur coals found in the Midwest and East. Obviously



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EDITORIAL

William Futrell

The View from the Summit

THE WAR ON INFLATION has replaced Watergate and the Arab oil embargo in the headlines. The Sierra Club's executive director and I participated in the recent round of regional and national meetings that culminated in President Ford's summit conference on inflation. From the summit, one thing did seem clear, and that was that economic analysis will be an even more important tool in environmental advocacy than it has been in the past.

Pre-summit rumblings from Administration spokesmen suggested that the "Economy Crisis" would replace the "Energy Crisis." It was disconcerting to hear in many of their statements a clear call for a rollback of environmental controls in the name of curbing inflation. The agenda for the pre-summit conferences, in posing possible courses of action, singled out a relaxation of environmental regulations as the way in which the federal government might help in the fight against inflation.

The 750 delegates, of whom 600 were corporation presidents, with the remaining 150 coming from labor unions and citizens' groups, did not rise to the bait. Instead, spokesmen for labor, business, and the Congress (as well as the eight environmentalist delegates) called for the implementation of energy conservation. The presidents of the nation's leading labor unions were particularly impressive in calling for a campaign for a healthier economy without sacrificing social and environmental gains. During an intermission in the proceedings, two union leaders expressed to me their appreciation for the Sierra Club's support of the boycott against the Shell Oil Company during the 1973 strike.

Although environmentalists were outnumbered, they were not outgunned. At the summit conference, they used economic facts and arguments to rebut the smear that environmental reform efforts are inflationary. Russell Peterson, Chairman of the Council on Environmental Quality, said that CEQ's most recent analysis of the impact of environmental programs on the economy indicate that these programs account for at most roughly one-half of one percent of our current inflation. Put in perspective, expenditures made during 1973 to satisfy requirements of federal water- and air-pollution-control legislation amounted to approximately one percent of our GNP. Actually, as long as environmental controls enable a reduction in damages at a lower cost than the damages themselves produced, real economic efficiency is improved. In this sense, environmental controls can be counter-inflationary in the sense that more value is received per dollar.

President Ford's proposals following the conference are disappointing in their emphasis on the accelerated construction of nuclear plants, amendments of the Clean Air Act, and a generally soft approach toward energy conservation. It appears that the new administration has not yet developed its own economics-energy-environmental program and is still relying on the oldtime religion that "more" is better than "enough"; that America's difficulties in the closely related areas of energy and economics are going to be solved by increasing the supply of offshore oil and building more nuclear plants, rather than by implementing a program of energy conservation coupled with a serious research-and-development program for new clean energy sources.

At the White House reception, I had the opportunity to tell President Ford that Sierra Club members wanted to be able to support his programs. And there is much we can support; for we are opposed to waste, to government policies shaped to protect a favored industry from competition at the expense of the public and the economy. Two examples are Civil Aeronautics Board's regulations that result in half-filled airplanes on even the most heavily traveled routes, and Interstate Commerce Commission regulations that require a trucker to ship a cargo on a roundabout route. However, as Congress begins to reform outmoded regulatory policies, we must beware of attacks on the environmental controls enacted during the past few years. Our opponents will certainly try to confuse the economically wasteful, anti-competitive variety of government regulation, typified by those of the CAB, ICC, and oil depletion tax subsidies, with the recent hard-won environmental regulatory activities of the EPA, and the technology assessment required by the National Environmental Policy Act.

The current debate on how to achieve a healthier economy is being phrased as a war against inflation, but the problem is more than inflation. A healthy economy and a healthy environment are compatible goals. The terms "economy" and "ecology" are both derived from the Greek word for household, suggesting that both disciplines bear on the manage-

Continued on page 38

these arguments are now in deep jeopardy." Ruckel said the report raises "serious questions of the advisability of stripping the Northern Plains," and he has called for a moratorium pending further study.

Club directors oppose breeder reactor program

The Sierra Club Board of Directors meeting in San Francisco, October 12-13, declared their opposition to commitments to move forward with the development of the liquid metal fast breeder (nuclear) reactor, thus changing club policy on the breeder to accord with the policy they declared last January on nuclear power in general.

"While the Sierra Club supports research on the unresolved problems of various types of nuclear reactors," said the directors' resolution, "it opposes commitments to move forward with the development of the liquid metal fast breeder reactor because:

"(1) The problems with light water reactors (core safety, theft, and waste disposal) also exist in the case of breeders;

"(2) Two of these problems would be more acute in the breeder (the safety problem would be more acute in that there would

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VENOMOUS ANIMALS OF THE WORLD

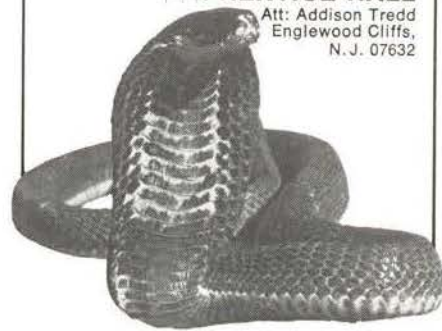
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REGIONAL REPS REPORT

Alaska: Energy and Politics

AT THE PROJECT INDEPENDENCE HEARINGS in Anchorage a parade of energy industry spokesmen and Alaska politicians enthusiastically endorsed the rapid extraction of the state's oil, gas, coal, geothermal, and hydroelectric power resources. Conservationist Charles Konigsberg summed up the hearing by observing that the corporation executives and their political allies perceive Alaska as a gigantic socket into which they intended to plug.

The hearing was strictly a public relations gesture, of course, with overtones, if not the style of an academic discussion—for outside the hearing the plugging was already well underway:

- Construction of the first trans-Alaska Pipeline was going ahead full-steam, with the Arctic Ocean now accessible via the pipeline haul road, tragically destined to be an all-year state highway;
- Oil and gas exploration is brisk on native and state lands, and on federal outer continental shelf lands;

- Exploratory drilling for oil and gas is taking place in the Kotzebue area of north-west Alaska on native and federal lands;
- The Navy has called for bids on exploration and development of its Petroleum Reserve Number Four;
- In fisheries-rich Kachemak Bay, Standard has joined Shell in an attempt—blocked thus far by angry fishermen—to drill exploratory wells in the midst of a critical crab and shrimp area;
- And the Interior Department, according to a memo leaked to the *Washington Post*, intends to lease 10 million acres of outer continental shelf next year, including 3.5 million in the Gulf of Alaska.

In moving to lease Gulf of Alaska OCS, Interior is disregarding the Council on Environmental Quality's report earlier this year that the Gulf presents the highest environmental risks of all the OCS areas. Nor is the department worried by the fact that environmental and marine resource studies by the National Oceanographic and Atmospheric Administration, a modest 2.5 million dollar effort, have just begun. Interior seems to be responding to the desires of the oil and gas industry which has given the Gulf top priority.

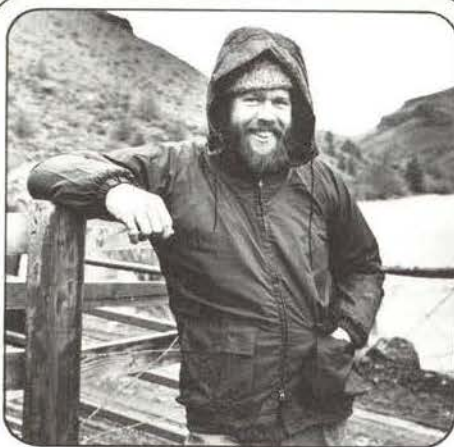
Industry's concern is also evident in a network of "public utility corridor" easements the department will soon identify prior to patenting federal land to the natives and the state. The corridors are designed to move oil and gas from existing and high-potential reserve areas to ice-free ports in southern Alaska and, with Canada's cooperation, to the lower 48 via overland routes. Details of Interior's plan will be revealed at a public hearing in Alaska later this fall, where it will draw heavy fire from Alaska natives and conservationists. Native villagers do not want the "bush" linked to the urban areas by roads, because experience has shown that new roads mean a substantial decrease in fish and game population on which they depend for subsistence. And native regional corporations, while not opposed to pipeline corridors (which would serve native-owned oil and gas too), see the easements as a taking of property rights without compensation. As in the case of the trans-Alaska Pipeline haul road, the highway lobby will surely attempt to parallel every new pipeline with a state highway.

Our opposition stems from Interior's haste to accommodate rights-of-way demands of the oil and gas industry at the expense of the national interest, a "d-2" proposal, and the comprehensive state transportation planning by Congress. Eight of the d-2 areas, for example, would be

crossed by corridor easements designed to move natural gas from only one area—the North Slope.

A genuine planning effort is still possible. Congress established a federal-state Land Use Planning Commission for Alaska and directed it to recommend comprehensive plans, including one for transportation. Unfortunately, however, the commission has not functioned as an independent source of information for Congress, but rather as a servant of the Nixon-Ford and, especially, the Egan administrations. Redirecting the commission to make it serve Congress and the public should be a goal of the Interior Committees' next sessions.

This November's gubernatorial contest reflects the concern of the Alaska electorate with the present stampede to extract the state's energy resources. The campaign theme is economic development—its location, timing, and how best to manage it in the interest of all Alaskans. Democratic Governor Bill Egan is, as usual, boosting as much development as possible, despite the opportunities for a different policy implicit in forthcoming state revenues of billions of dollars from the Prudhoe Bay Pipeline alone, and despite the adverse social and inflationary effects of the present phase of



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pipeline construction. The one exception to this policy is the governor's opposition to leasing and development of federal OCS lands. Since the state would derive no revenue from such production, but would be faced with the associated costs of new public services for industry's work force, it wants 50 percent of OCS revenues before it will support such production.

Egan's opponent is Jay Hammond, a guide, fisherman, and former state senate president (until gerrymandered out of office by Egan) from Bristol Bay who decisively upset former governor and Interior Secretary Walter Hickel in the Republican primary. Hammond has seen first-hand what outside economic forces—the Seattle and Japanese salmon industries—have done to one of the state's (and the nation's) most important renewable resources, the seriously depleted Bristol Bay red salmon run, once the world's largest. Elsewhere, his fishermen supporters daily watch timber interests from Japan and the lower 48 states damage the anadromous fish streams, watersheds, and estuaries of the Chugach and Tongass National Forests. As senate president, Hammond suggested that a closer look might be

Continued on page 38

ANNUAL ELECTION

The annual election for directors of the Sierra Club will be held on April 12, 1975. The Nominating Committee has presented to the Board of Directors the following nine names for the five positions to be filled: Kathleen A. Bjerke, John M. Broeker, Brant Calkin, Joseph Fontaine, J. William Furell, Theodore Hullar, John H. Ricker, E. Paul Swatek, Ellen Winchester.

Members of the Club may add to this slate of candidates by petition. The requirements for such petitions are: (1) a petition for nomination shall be directed to the Nominating Committee, Sierra Club, 1050 Mills Tower, San Francisco, CA 94104; (2) each petition must be signed by at least 401 members in good standing (one percent of the ballots cast in the last election) and shall also show the petition signer's printed name, address, and membership number; (3) petitions must be received at the club office by December 31, 1974; (4) the signed, written consent of the proposed candidate must accompany the petition.

Northern Plains: No Mine for Meeteetse

MEETEETSE is a small town of 400 people tucked away on the eastern flank of the Absaroka Mountains in northwest Wyoming. It is a town of ranchers and local businessmen, many of whom are third-generation members of families who originally settled the valley. It is a rugged valley with rugged people who place a high value on their particular way of life.

But 39 miles west of Meeteetse at the head of the Wood River lies Kerwin, an abandoned mining site owned by American Metal Climax, Incorporated (AMAX), and AMAX now has proposed an open-pit copper mine for the site, which contains a low-grade copper-molybdenum ore. Since prices have so escalated, AMAX is now going through the preliminary rituals to clear the way should the corporation decide to develop the mine.

The life of the mine would be 15-35 years and would employ 342 workers permanently and 750 during the construction phase, with an annual operating payroll of \$3,146,935. Tailings from the flotation process would be slurried to a disposal reservoir, the site for which AMAX has recently filed application—some 15 steep, landslide-prone miles away from the mine. The tailings contain many trace elements, including arsenic, mercury, zinc, fluoride, and cyanide—all of these in amounts whose effects on human life, vegetation, domestic stock, and wildlife are unknown. Should the pipeline burst or the tailing pond leach, these elements would be released directly into the Wood River—the source of water for Meeteetse and local irrigators. The present dirt road up the valley would be upgraded to primary standards, capable of handling 10-12 ore trucks daily traveling at 45 miles per hour.

The handwriting is on the wall and Meeteetse residents do not like what it spells for their valley. In response, ranchers and townspeople formed the Meeteetse Preservation Organization because they felt "the character and rugged beauty of our area should not be subjected to possible dangers by uncontrolled mining development." They have retained William Ruckelshaus as their lawyer, raising \$5,000 from within the

community for his advisory services.

AMAX's feeble efforts to evaluate all the potential impacts through the less-than-adequate studies conducted by ROMCOE and the Thorne Ecological Institute have not cut the mustard with Meeteetse residents. The US Forest Service on one hand showed good faith in setting up an "Ad Hoc Planning Team," but on the other has done nothing further to involve the residents in the "team." None of this "PR environmental gloss" has carried with it what Meeteetse feels it rightly deserves: a real respect for the community. As one resident pointed out, "Why should we be asked to sacrifice our way of life to "progress" when we know 25 percent of what's presently being produced is simply wasted?" Eighty-five percent of the community is willing to put its own special sense of belonging and caring *above* the music of cash registers, and that sense does deserve to be recognized.

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A Message from the Club President to the Membership:

BY THE TIME this *Bulletin* arrives, you will have received, read and possibly responded to my Annual Fund Appeal and Report 1974-75. Perhaps the cartoon reproduced below will refresh your memory.

Since this report and message were written, there have been no significant changes in our projections for the budget year which began on October 1. The budget was prepared in its original version by a committee of volunteers from all sections of the country under the able leadership of board member and treasurer Paul Swatek. Their work was reviewed and changed in some areas by the Executive Committee and finally adopted with adjustments by the full Board of Directors. It represents a comprehensive effort to assess Club priorities as well as income expectations.

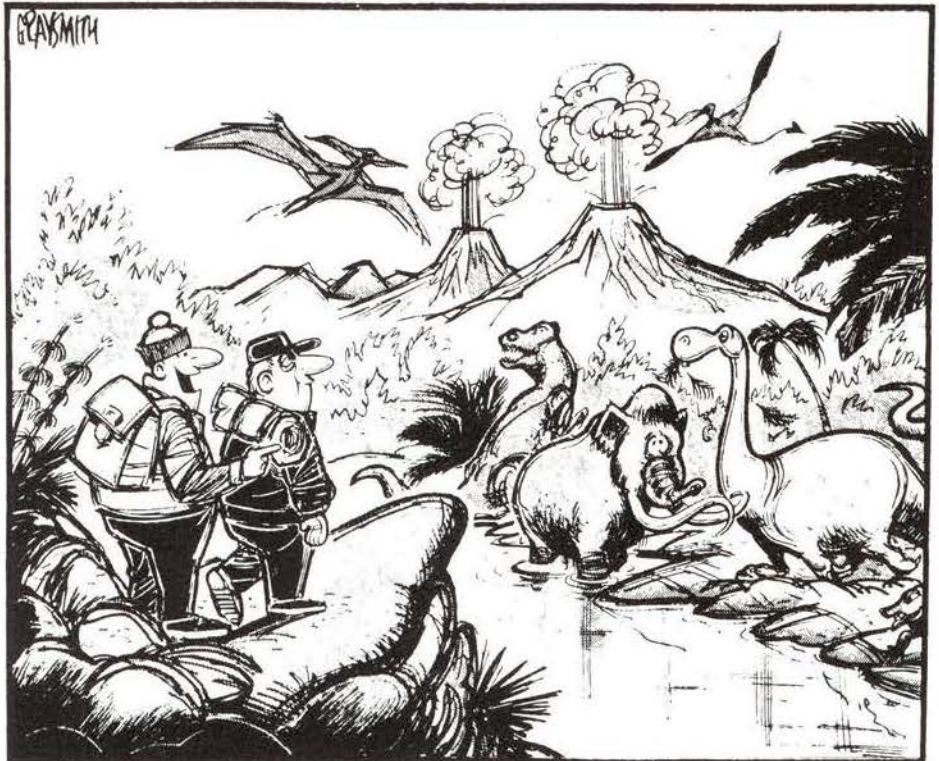
The total expenditure is projected at \$4.5 million, a raise of 6 percent over the previous year. Most of the dollar increase was due to the availability of new funds for special programs.

This budget assumes that over half the dollars spent for conservation programs, both legislative and non-legislative, will come from gifts and grants. This should give us all food for thought. The council has recommended, and the board has concurred, that no dues increase be placed upon the ballot for the next election in Spring 1975 in spite of the loss of purchasing power of the basic \$15 dues.

I would like to suggest that in the best tradition of responsible membership in the club that you vote your own dues increase by raising the amount that you give for club programs, either by special gift now or as you renew your own membership during the fiscal year. With our large membership of 144,270, a significant increase in the number of those members making special contributions would insure our ability to meet our needs from contributed income.

In the Annual Fund Appeal and Report, I have stressed the need for more non-deductibly given "hard" dollars which can be used to fund our hardrock legislative program and our field offices. Your board is concerned that we maintain these programs and expand them whenever feasible. For instance, Washington Representative Brock Evans is urgently requesting additional funding for our national legislative effort.

The adoption of the current budget with its assumption of a continued high level of contributions in these troubled times to our three organizations was an act of faith on the part of your club directors. I am confident that your response to our single mailing this year will sustain that optimism.



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Cordially,

Kent Gill

KENT GILL

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and Threatened



Joel Bennett

ISLANDS IN ALASKA number in the thousands, so it is not likely that the mention of Afognak will inspire immediate recognition or alarm in most people. However, there is ample cause for both. In pursuing its apparent policy of considering the commercial harvest of timber as its primary goal, the U.S. Forest Service in 1966, with the concurrence of a state task force appointed by then Governor Walter J. Hickel, began preparing the Perenosa Timber Sale on Afognak Island.

Although widely opposed by the public and pointedly questioned by governmental agencies, the Forest Service began to implement the Perenosa timber sale in June, 1974, with the construction of a preliminary logging road and work camp. The Forest Service's actions on Afognak echo its practices in timber sales elsewhere: make an immediate commitment, but postpone a complete evaluation of the environmental impact of the sale. John McGuire, Chief of the Forest Service, has turned down an appeal filed by the Alaska Conservation Society and the KONIAG Native Association to reconsider the terms of the sale. The decision now rests with Secretary of Agriculture Earl Butz. The Forest Service has denied a stay pending appeal, so purchasers are going ahead with road building in preparation for full-scale logging.

Afognak Island is located 250 miles southwest of Anchorage, Alaska's largest city. Its latitude approximately bisects southeastern Alaska, making its climate more like that of Juneau than Anchorage. Aleut natives, who named the island, originally settled there to harvest its rich salmon resources, but with those resources depleted it has been only sparsely inhabited since then. In the 18th century, the Russians occupied and exploited Afognak; later, the English explored

and mapped its coastline. The only modern-day village, Afognak, was abandoned following the 1965 Alaska earthquake, and present-day maps indicate that human activity has had little impact there. Not for long.

The terms of the Perenosa sale, made five years ago, called for clear-cutting 525 million board feet on a 15-year contract, with about 21,000 acres to be clearcut in 73 units. There has been no cutting under this contract to date, however, because the purchasers of the timber originally bid far too much money for it. Now that prices are up, they have once again become interested. So the Forest Service has obligingly agreed to let them cut for ten years instead of 15—at the same rate per year, 35 million board feet. In other words, in response to adverse public reaction to the original terms of the sale, the Forest Service has pretended to revise the cutting plan. Although the new plan calls for a 37-percent decrease in the sales volume, smaller cutting units, and a greater distribution of these units, the timber will still be cut at the same rate per year. Though reduced in size, the cutting units are still too large, and the allowable cut is far too high, as in other places where the populace has problems with the Forest Service. As usual, Alaskan timber is earmarked for sale to Japan.

The Forest Service's claim that environmental considerations motivated their revision of the contract is suspect. In a settlement of the Sierra Club's roadless-area suit of 1972, the Forest Service agreed to do environmental impact statements on all actions affecting roadless areas, including five-year "redeterminations" of contracts, of which Afognak was one. Proceeding under the original sale contract, but on a ten-year basis, would have violated the Multiple-Use

Sustained Yield Act of 1960, since sustained yield on Afognak (approximately 37 million board feet a year) would have been exceeded by about 15 million board feet.

Cutting Afognak under either of the plans that have been offered measures land values in narrow economic terms. Compared with commercial timber elsewhere in the Chugach National Forest, the Afognak cut promises to be by far the largest yet; in the last six years, no Chugach sale has exceeded four million board feet. It is clearly an irrevocable commitment of a large



Joel Bennett

roadless area to commercial ends precisely at a time when the public seems least willing to do so.

Recreational opportunity on Afognak overwhelms even the casual visitor, but because there have been few visitors to the island, few people appreciate what exists there. What does exist is unique and compels a halt to all further sale operations until there has been a chance to evaluate alternatives for land use on the island.

Future native land selections, under the Alaska Native Claims Settlement Act, will affect drastically the amount of land available for public use on Afognak. The island's total area is about 400,000 acres, 70,000 of which, at the very least, will be selected by Afognak Village. Other claims of eligibility exist from at least four villages not listed in the act, but these may be approved by the Department of the Interior. In addition, two approved villages on Kodiak have partial selection rights on Afognak. Future selections by all these villages could occur on Afognak, significantly limiting the amount of public land remaining there. This possibility, combined with the Forest Service's large-

scale commitment to timber cutting, may leave little for the rest of the public to use.

Upon visiting Afognak, one is startled with the unusual pattern of the island's vegetation, which is so unusual, in fact, that the Forest Service acknowledged in its Final Environmental Impact Statement of April 15, 1974, that "its unique characteristics are not found elsewhere in the United States or Alaska." Generally, the pattern is a park-like combination of open treeless grasslands and stands of Sitka Spruce. These areas alternate with no particular regularity, affording gentle rolling hiking for the feet and diversity for the eye. The brush-grass-spruce ecosystem represents the picturesque meeting of the dense rain-forest common to southeast Alaska with the open, treeless expanses of the Aleutian Islands. Kodiak Island, Afognak's neighbor, shows some evidence of this transition, or ecotone, but on nowhere near the scale found on Afognak.

One-half of Afognak is unforested. Logging, then, must occur on only one-half the island. Oddly enough, hemlock, which is generally so common in the southeastern portion of the state, is nonexistent here. Sitka Spruce is the sole timber species of commercial value on the island, where it reaches the western limit of its range. The all-spruce forest remains one of the unique features of Afognak.

Afognak's spruce forest is the vanguard of a northwestward advance that began at the close of the last ice age. The spruce is moving into the grasslands at the slow rate of about one mile per century, or 50 feet per year. It is generally believed that the slow progress may be a function of the sterility of the soil in this region. It has taken centuries for sufficient plant nutrients to accumulate in the soil to support forest. At first, the young trees grow very slowly, but gradually grow faster as they build up their own nutrient reservoir from lichens, bird droppings, mycorrhizal fungi, and fixed nitrogen from rain and primary vegetation. Eventually, the trees begin to recycle their own nutrients as leaves fall, and the cycle of decay and growth accelerates.

Much of the resistance to the Perena timber sale is in response to the Forest Service's insistence on employing clearcutting in an area where timber regeneration is slow at best.



Joel Bennett

Several studies by the Forest Experiment Station on the island show that it takes a long time for trees to become established following logging, and that when they do, they grow very slowly. One area clearcut in 1960 shows virtually no regeneration. The only satisfactory regeneration exists in small openings where insects have killed the trees in the 1930's and where selective logging was practiced during the 1940's. The experiment station also reports that two-thirds of the seedlings grow on rotten wood and upturned roots, presumably because these more readily provide the necessary nutrients for growth than does the soil itself.

Conditions that elsewhere produce predictable regeneration cycles do not exist on Afognak. Mainland volcanic eruptions over the centuries, and most recently in 1912, have covered the

Joel Bennett



island with a basic volcanic-ash soil, which the Forest Service's impact statement acknowledges "has little erosion resistance once it is exposed to the elements." One of these "elements" is the average yearly precipitation of 60 inches at Kitoi Bay. The same lack of humus that makes the soil so inhospitable to forest regeneration also contributes to erosion in that there is no binder to hold the light ash particles together. As a result, they are dislodged easily and carried away by runoff. The more than 140 miles of road planned for the cutting area will substantially increase the risk of erosion. The existing contract requirement to "promptly" remedy pollution or stream sedimentation may well fail to avert permanent damage from initial construction activity.

Because of the slowness with which the forest regenerates and the dangers of severe erosion, researchers have repeatedly advised caution with regard to logging this area and have recommended some form of selective cutting, rather than clearcutting, in order to obtain sufficient regeneration. Nevertheless, the Forest Service stubbornly insists on clearcutting and hopes to solve the regeneration problem by dumping biocides on the fast-growing grasses and brush that will compete with spruce seedlings. Even though this practice is common in other places, there is no guarantee that it will work here.

The effect the timber sale will have on the spectacular island wildlife—which includes the rare bald eagle and Alaskan brown bear, as well as the largest herd of elk in the state—is uncertain, largely because the Forest Service has made little effort to find out. But it is hard to imagine how the results could be other than disastrous. To differing degrees, the bears, the elk, and the eagles all depend on the forest habitat for maintaining healthy populations, if not for survival. A radical change in this habitat is likely to produce alarming changes in the local wildlife populations.

With habitual nonchalance, the government has once again relegated the magnificent brown bear to a subordinate position in the scheme of things: the Forest Service flatly admits that "the size of the population is unknown." Population-size projections based on spring and fall hunting statistics kept by the Alaska Department of Fish and Game from all of

Spruce is creeping into the arctic grassland on Afognak following retreat of Pleistocene Ice. Their slow progress is limited by the supply of available nitrogen, phosphorus, and calcium, notably lacking in the recently created earth.



Joel Bennett



Gordon Robinson

The spruce forests grow very slowly when first established, but achieve reasonable growth rates in the course of two to three hundred years.

Regeneration is sparse after logging, but does best in small openings created under a selection system of management. Seedlings tend to grow on decaying wood and around stumps, where the accumulated plant nutrients are offered by nature for recycling.



Gordon Robinson

Gordon Robinson



Regeneration is very slow and sparse in old clearcuts. If any logging at all is to be permitted in this strange and wonderful place, it should certainly be conducted under a highly conservative system of selection silviculture.



Joel Bennett

Afognak are superficial and bear little relation to actual population numbers. Extraordinarily dense vegetation prevents both accurate aerial observation or intense hunting, both traditional devices for measuring population.

The brown bear is faced with extinction outside of Alaska and is subjected to increasing pressures within the state. The Alaska Peninsula, a vast area 60 miles northwest of Afognak and noted for its plentiful bear population, was closed to bear hunting in the spring of 1974 because state management officials pointed to decreasing skull size as evidence of too much pressure there. Hunters now will turn to Afognak in greater numbers despite its limited access and adverse weather. More than ever, it is essential to have a comprehensive and accurate survey of bear distribution and habitat, including all sites subjected to high use during the spring and fall, and the specific areas used for dens, sleeping, and escape. According to state fish-and-game officials in Kodiak, no such survey has been made. Ironically, the habitat that now protects brown bear and makes them, according to the Forest Service, one of the "few relatively un hunted populations of brown bear in the world," will gradually disappear with the cutting, presumably allowing a more accurate assessment of bear numbers at that time. But then it may be too late.

Research on nesting sites and population numbers of the resident bald eagles has been almost as superficial as that on brown bear. The U.S. Bureau of Sport Fisheries and Wildlife, through an aerial survey, has located only 19 nest locations within the sale area of 120,000 acres. Officials from that agency concede that such an estimate is extremely low, and that an aerial count of this sort "in anything

but a cottonwood forest is absolutely invalid." Similar habitat in southeastern Alaska would be expected to yield an average of one nest per mile of beach front (the sale area includes 60 miles of protected coastline). Pronouncements to the public such as "additional nests can be expected and will have to be located" offer little consolation. Once again, future generations may be forced to cope with disasters arising from present uncertainties.

Elk exist in Alaska only on Afognak and its two small associated islands—Shuyak and Raspberry. The elk were planted there in 1928 from Washington's Olympic Peninsula. Majestic and far ranging, several herds on Afognak frequent the sale area and depend on key regions within it for winter range. According to the Alaska Department of Fish and Game, the spruce-climax-forest community is extremely important to Afognak's elk. Throughout the

Joel Bennett



Joel Bennett

severe winter, elk stay within the forest canopy, venturing into the shrubland to feed only for short periods. As with other relatively uncontrolled populations, that of the elk rises and falls primarily as a result of weather conditions. Complete surveys of key winter ranges have not been made in such important areas as the west side of Waterfall Bay and from Saposa Bay south and west of Cape Kastromitnof. Again, the final impact statement notes that disturbance of the elk's winter range is considered to be of "particular importance." It would appear im-

possible to avoid such critical areas of winter range if they have not been completely identified.

With regard to disturbing wildlife, the Forest Service's Environmental Impact Statement does not refer to the 1972 Leopold-Barrett report on the implications for wildlife of the 1968 Juneau-unit timber sale in the Tongass National Forest. Much in that lengthy report is relevant to Afognak because it refers to a similar habitat and wildlife population. Specific concerns about the long-term effects of clear-cutting on wildlife, such as a relative shaping and sizing of clearcuts, vegetation changes occurring after secondary succession, and deer foraging patterns, are among those discussed in the report that one might assume would also be included in the Forest Service's own statement.

Alternatives exist for public use of Afognak; immediate and long-term commitment to timber harvest is reckless in view of the glaring omissions to date in both research and planning. Bilateral cancellation of the contract is an unlikely prospect at this point, but unilateral cancellation or further substantial contract modification is essential to adequately protect the public interest. Typically, the Forest Service has moved ahead, at odds with the public and armed with incomplete data. The potential outcome at best is unknown, at worst disastrous. The public deserves a comprehensive assessment of the effects of large-scale cutting on Afognak. Only after this is completed will both the public and the Forest Service be able to evaluate recreational and wildlife potential in light of present and future needs.

Joel Bennett, a conservationist and professional photographer working out of Juneau, recently spent much time on Afognak Island in an attempt to capture on film the lives of the island animals.



Joel Bennett



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Cristina found a friend

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Cristina Aguilar's case is typical.

Her father works long hours as a share-cropper despite a chronic pulmonary condition that saps his strength. Her mother takes in washing whenever she can. Until recently, the total income of this family of six was about \$13.00 a month. Small wonder that they were forced to subsist on a diet of unpolished rice, swamp cabbage, and tiny fish the children seine from a nearby river.

Now Cristina enjoys the support of a Foster Parent in Tennessee whose contribution of sixteen dollars a month assures Cristina and her entire family of better food and health care. And, when Cristina is old enough, the help of her Foster Parent will give her a chance for an education, an opportunity to realize whatever potential she has to offer to this world.

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SIERRA CLUB OUTINGS 1975

1975 Spring Trips

The 1975 Spring Outings will visit a wide variety of wilderness areas ranging from canoeing on the Suwannee River in Georgia to family camping on the wilderness beaches of Hawaii; from ski touring in Colorado or the High Sierra to leisurely boat trips off the coast of Mexico. Most trips, however, will focus on the canyon and desert country of the Southwest and Mexico, a region that is in its prime in the early spring when water is plentiful, temperatures are comfortable, and wildflowers are in full bloom.

Sierra Club trips are generally organized on a cooperative basis: trip members help with the camp chores including food preparation and cleanup under the direction of a staff member. First-timers are often surprised at the satisfaction derived from this participation. To determine which outing best fits your needs, read the following trip descriptions carefully and see "For More Details on Spring Outings" below. Reservation requests are being accepted now for all spring trips. See "Reservations On Sierra Club Trips."

(200) Cross-country Ski, Rocky Mountain National Park, Colorado—February 2-7. Leader, Kurt Newton, c/o Allyn Worman, 12143 E. Kentucky, Aurora, CO 80012. Limit 10, cost \$80.

Enjoy six fantastic days of skiing in the Wild Basin territory in the southeast Park. We'll sleep in a park service building with daily trips radiating out from there. An optional night for hearty souls may include a snow cave sleep-out. The week is designed to bring the non-expert into a wintertime situation and develop the resourcefulness so necessary in the back-country.

(201) Desert Ecology High-Light Educational, Arizona—February 9-15. Instructor, Pierre Fischer, Ph.D. in botany; leader, John Ricker, 2950 N. 7th St., Phoenix, AZ 85014. Limit 20, cost \$150.

A professional ecologist and botanist will acquaint trip members with the natural history of the Arizona desert on this hiking trip to the Cabeza Prieta Mountains on the western edge of the Cabeza Prieta Game Range, being considered for



Fred Lochner Jr.

Wilderness classification. Through this area runs Camino Del Diablo, used in the 1850's by gold hunters. Many perished from extreme heat and lack of water. We will use four-wheel drive vehicles to carry supplies and equipment. We will climb some of the rugged peaks and look for desert Bighorn Sheep, and Sonoran Antelope.

(300) Kauai Easter Family Trip, Hawaii—March 21-30. Leaders, Tannisse Brown Rost and Toni Weyman, 1680 Bryant St., Palo Alto, CA 94301. Limit 30, cost \$510, includes air fare to Hawaii (children under 12, \$440); \$25 deposit per person.

On this leisurely family trip on the garden island you'll have your choice of short or long day hikes, sightseeing, swimming, beaching or snorkeling. Beach campsites are Hanalei and Salt Pond, and our mountain campsite at 3,600 feet is Kokee. You'll see Waimea Canyon, Hawaii's Grand Canyon, and we'll offer hikes along the upper edge of Kalalau Valley, Alakai Swamp and up the rugged Na Pali coast to Hanakapiai. An anthropologist joins us for an educational day. Children over 10 welcome.

(301) High Uintas Knapsack Service Project, Utah—March 22-29. Leader, Alan Schmierer, 231 Erica Way, Portola Valley, CA 94025. Limit 20, cost \$45.

Although winter snows will delay selection of the exact work site, we will assist the Forest Service in tree inventory and planting on the southern slopes of the unique Uinta Mountains. Expect spring snow flurries to spice our 8600-foot sojourn among serene lake basins in dense aspen groves.

(302) Grand Canyon National Monument-Tuckup Canyon High-Light, Arizona—March 22-29. Leader, Ray Des Camp, 510 Tyndall Street, Los Altos, CA 94022. Limit 25, cost \$215.

From our roadhead on the North Rim, south of Pipe Springs National Monument, we will descend a scenic 2000 feet to the Esplanade to meet the trail which skirts Tuckup Canyon. There will be spectacular views of both North and South Rims, and of the Dome and the Colorado River. One day we will follow down Tuckup Canyon itself to the Colorado River. Other lay-over days will give us time to explore more canyons tributary

to the Colorado, and the Esplanade near the Dome. Daily hiking will be moderate.

(303) Anza-Borrego Desert Base Camp, California—March 23-29. Leader, Bob Miller, 25 Sharon Ct., Menlo Park, CA 94025. Limit 22, cost \$130.

This Easter Special will be in the largest state park in California, with our camp located near Borrego Springs, 90 miles northeast of San Diego. The outing is designed for those who would like to explore by foot and by car, the natural wonders of the living desert in bloom. We will use members' cars to radiate out from camp to various points of interest from which our daily hikes will begin. Most of the hiking will be very easy.

(304) Panamint Mountains Burro Trip, California—March 23-29. Leader, Dan Holmes, 11 Cresta Blanca, Orinda, CA 94563. Limit 18, cost \$185.

The route of this burro adventure begins at the desert town of Ballarat, ascends a strenuous 7000 feet over the crest of the Panamint Range and returns via Hungry Bills Ranch and the World Beater Mine. These rugged mountains offer incredible views of the Death Valley wildlands. The ghost town of Panamint City is the highlight of our glimpse into California's mining days. Our wonderful trail companions, burros, provide help by carrying food, water and dunnage.

(325) Sea of Cortez Leisure Trip, Mexico—March 23-30. Leader, Monroe Agee, 13750 Rivulet Rd., San Jose, CA 95124. Limit 20, cost \$495 round trip from San Diego; \$50 deposit per person.

This cruise is an adventure in sea life, designed to meet the requirements of both the physically active and lazier ones. We start at La Paz, on the west side of Baja California and continue along the coast to San Felipe. Along the way we will visit exotic islands and observe the abundant sea life of whales, dolphins, frigate birds, boobies and pelicans as they go about their undisturbed way.

(306) Okefenokee-Satilla-Suwannee Canoe Trip, Georgia—March 23-30. Leader, Tom Bullock, 1420 NW 30th St., Gainesville, FL 32601. Limit 18, cost \$140.

In an enchanted corner of the Old South lies the mysterious Okefenokee Swamp, a true eastern wilderness, filled with moss-covered cypress, floating islands of peat, alligators and other swamp creatures. This trip will spend a leisurely three days crossing the swamp. In the rest of the trip, we will float the upper Suwannee, which has its origin in the swamp, and the remote and wild Satilla, east of the swamp. Canoe skills are desirable but the most important prerequisite is a cheerful acceptance of what comes. Age limit 14 with sponsor. Canoes are not provided, rental canoes are available.

(400) Rock Creek Alpine Ski Touring Camp, Inyo Forest Sierra—April 5-12. Leader, Sy Ossofsky, 237 Mountain View Road, Bishop, CA 93514. Limit 21, cost \$135.

Change from crowded resort skiing and see the High Sierra at its finest! Base camp will be at the 9300-foot level, eight miles above our roadhead, Tom's Place, on Highway 395, north of Bishop. We will have large tents for commissary, eating, and gatherings when the weather is bad. Our ski touring can range from nordic to advanced ski mountaineering, and the trip should be considered strenuous with a reasonable level of skiing competence being necessary. Leader approval will be required.

(401) Canyonlands High-Light, Utah—April 19-26. Leader, Ray Des Camp, 510 Tyndall Street, Los Altos, CA 94022. Limit 25, cost \$195.

Canyonlands National Park lies in southeastern Utah, west of U.S. 163 between Moab and Monticello. From our Squaw Springs roadhead we will travel separately through the Needles Country, meeting our jeep support at night. Our daily

FOR MORE DETAILS ON SPRING OUTINGS . . .

For more information on any of these trips, write the Sierra Club Outing Department for the specific supplement of that outing. Trips vary greatly in size, cost, in the physical stamina and experience required. New members may have difficulty judging from these brief write-ups which one is best suited to their own abilities or interests. Don't be lured onto the wrong one! Ask for the trip supplement before you make your reservation, saving yourself the cost and inconvenience of changing or cancelling a reservation. Beyond the first five supplements requested, volume requires that we must charge 50 cents each. Write or phone the trip leader if any further questions remain.

hiking will be moderate, with more ambitious side trips available for those interested. We'll see Elephant Hill, the Devil's Pocket, Chesler and Virginia Parks, and perhaps Angel and Druid Arches. The area is also rich in prehistoric Indian ruins and pictographs, some of which we will see in our travels.

(500) Grand Canyon Oar Trip, Arizona—May 4-15. Leader, Rouen Faith, 6122 Montgomery Ct., San Jose, CA 95135. Limit 23, cost \$545; \$50 deposit per person.

Perhaps the greatest combination of canyon beauty majesty, detail, variety of nature, 225 miles of peaceful river and wild exciting rapids to be found anywhere. Only 4-5 persons share the 17' x 7' inflated raft with the experienced professional oarsman. Important to Sierra Club type people is the very sensitive approach of the outfitter—we stop frequently to see, feel, smell, and learn about things normally missed with most commercial trips. Min. age 15 (18 solo). Cost includes round trip transportation from Flagstaff.

(501) Puerto Vallarta Boat Trip, Mexico—May 5-17. Leaders, Ellis and Margaret Rother, 903 Sunset Dr., San Carlos, CA 94070. Limit 30, cost about \$545 from Los Angeles, about \$505 from San Antonio & about \$400 from Puerto Vallarta; \$50 deposit per person.

After 2 days in Puerto Vallarta, we board native pangas and shove out into the blue Pacific. We beach through the breakers, camp on lonely beaches backed by tropical jungle, visit primitive villages, reef-dive, fish and hike jungle paths. The outdoor exposure makes this a trip for active, experienced campers. Minimum age 14.

(502) Main Salmon River Highwater Raft and Horseback Trip, Idaho—May 18-23. Leader, Kurt Menning, P.O. Box 582, San Jose, CA 95106. Limit 19, cost \$325.

This is a chance to run the Main at high water and to com-



bine the river ride with a horseback trip into the high country above the Shepp Ranch before the final run to takeout near Riggins. This trip will not be run if water is too high for safety (1974 was the first year in the last six with unsafe water at mid-May). Min. age 15 (with responsible adult), 18 solo. Cost includes transportation from Salmon and to McCall, Idaho.

Knapsack Trips

Knapsack trips offer the most freedom for exploring wilderness because everything you need is on your back. The leader is free to follow his own route, alter plans on whim, and camp almost anywhere. Young and old are today showing an eagerness for the adventure, solitude and personal challenge of knapsacking. Sierra Club trips provide all these rewards as well as the example of how to knapsack knowledgeably and comfortably. Knapsacking is strenuous activity, however. For a trip of a week, the starting load may weigh from 35 to 50 pounds, but the exhilaration and extra physical effort make you feel more a part of the wilderness. With today's new designs in backpacking equipment, almost anyone in good health and physical condition can enjoy knapsacking.

All trips require members to help with the cooking and camp chores, although the leaders provide commissary equipment and food. Trip members bring their own packs, sleeping bags, shelter, and clothing.

Trips are categorized as leisure, moderate, and strenuous as rated by the individual leader. The ratings are made as accurately as possible on the basis of total trip miles, cross-country miles, the aggregate climb, terrain difficulty and elevation. Of course, the effect of optional recreation activities and the weather cannot be accurately predicted; early-season trips in high mountains, for example, tend to be more adventurous because of snow and full, rushing streams.

Strenuousness is measured also in less obvious ways. Desert trips usually pose water problems, and members are



Donald L. Gibbon

often required to carry liquids which significantly increase their pack loads. Canyon trips obviously entail steep descents and climbs and quite variable temperatures from top to bottom.

The special demands of knapsacking require that the leader approve each trip member. Approval is based on your response to questions about previous knapsacking experience and equipment. If you lack experience or have never knapsacked at high elevations for any length of time, you may qualify for one of the less strenuous trips by going on weekend knapsacking outings prior to the trip. Acclimatization before each trip is essential. Unless otherwise stated, minimum age on knapsack trips is 16, although qualified youngsters of 15 are welcome if accompanied by a parent.

(307) Unkar Basin, Grand Canyon, Arizona—March 16-22. Leader, Les Albee, 130 S. Rocky Dells Dr., Prescott, AZ 86301. Limit 13, cost \$85.

This moderately strenuous trip will descend the South Rim 4,500 feet via the Tanner Trail to the Colorado River near Cardenas Creek. We'll cross the river in an inflatable kayak, pass through the large Indian ruins overlooking Unkar Rapids and proceed to First Spring on Unkar Creek. Our third and fourth days will be spent exploring upper Unkar Basin.

(308) Tanner-Hance Trails, Grand Canyon, Arizona—March 23-29. Leader, Bob Madsen, 3950 Fernwood Way, Pleasanton, CA 94566. Limit 13, cost \$100.

A moderate trip from Lipan Point to Grandview Point on the South Rim of Grand Canyon National Park. A trip of contrasts, from the wide canyon area below the Palisades of the desert to the narrow confines in Granite Gorge.

(309) Island in the Sky, Saguaro Monument, Arizona—March 23-29. Leader, John Peck, 4145 E. Fourth St., Tucson, AZ 85711. Limit 14, cost \$70.

Travel from desert (3000') to Hudsonian Life Zones (8600'). View of all other southeast Arizona mountain islands. Recommended as a first western hike for hikers from east of the Rockies. Simple access to Tucson by air. Moderate, but rocky and steep. Pleasant company and good food.

(311) South Bass Trail to Tapeats Trip, Grand Canyon, Arizona—March 29-April 6. Leader, Tom Pillsbury, 1735 Tenth St., Berkeley, CA 94710. Limit 12, cost \$145.

This will be a strenuous trip for experienced backpackers in the western part of Grand Canyon National Park, carrying heavy loads (up to 50 lbs.) cross country for parts of the trip. We will go down South Bass trail to the river, cross by small rubber boat and go out by Crazy Jug point on the north rim if conditions permit.

(402) Kanab Canyon-Thunder River, Arizona—April 13-20. Leader, Chuck Kroger, Box 332, Lakeside, MT 59922. Limit 13; cost \$110.

This strenuous knapsack trip will visit several of the most spectacular areas of the North Rim of the Grand Canyon. Fabulous Kanab Canyon will be entered via Sowits Canyon and the incredible narrows of Jump Up Canyon. We will then move along the Colorado to Thunder River. We will climb to the Esplanade and thence to the North Rim.

(503) Southern Utah Canyonlands—May 17-23. Leader, Frank Nordstrom, 800 Glade Rd., Farmington, NM 87401. Limit 12, cost \$60.

Each year this hike selects a new area to explore, a destination not revealed until the hike begins. Utah's canyons are rugged, remote, colorful and exquisitely beautiful. Flowing springs along the route make this a desert hike in which water is rarely a problem. Ancient ruins give evidence of previous occupation by the Anasazi.

(504) Paria Canyon, Arizona-Utah—May 25-31. Leader, Edith Reeves, 1739 E. San Miguel Ave., Phoenix, Arizona 85016. Limit 16, cost \$80.

Paria Canyon, a Primitive Area, with its perennial stream, is the first large drainage to empty into the Colorado River below Glen Canyon Dam at Lee's Ferry. Steep canyon walls, meanders, natural amphitheaters, side canyons await your exploration. Long warm days make this an ideal leisure knapsack trip in early summer.

FOREIGN OUTINGS

1975

Sierra Club Foreign trips offer members a unique opportunity to come to know the scenic areas and natural history of other lands. Trips are as close to the land and people as possible and include walking and hiking, with visits to cultural sites in the cities. A \$50 per person deposit is required with your reservation. Prices quoted are approximations, and do not include air fare.

New Zealand Boating Adventure (606) February 1-March 4

We will visit the coastal waters and run easy rivers in this people-to-people trip of New Zealand. Leader, Ann Dwyer, 125 Upland Rd., Kentfield, CA 94904. Limit 15, cost approximately \$1050 (incl. Kayaks) plus air fare.

Galapagos Islands, Ecuador (607) February 27-March 19

The lush greenery, stark lava land and blue water offer great possibilities to artists and photographers. Leader, Evelyn Mitchell, 65 Hillside Ave., San Anselmo, CA 94960. Limit 10, cost approximately \$1100 plus air fare.

East Africa (605) March 1-28

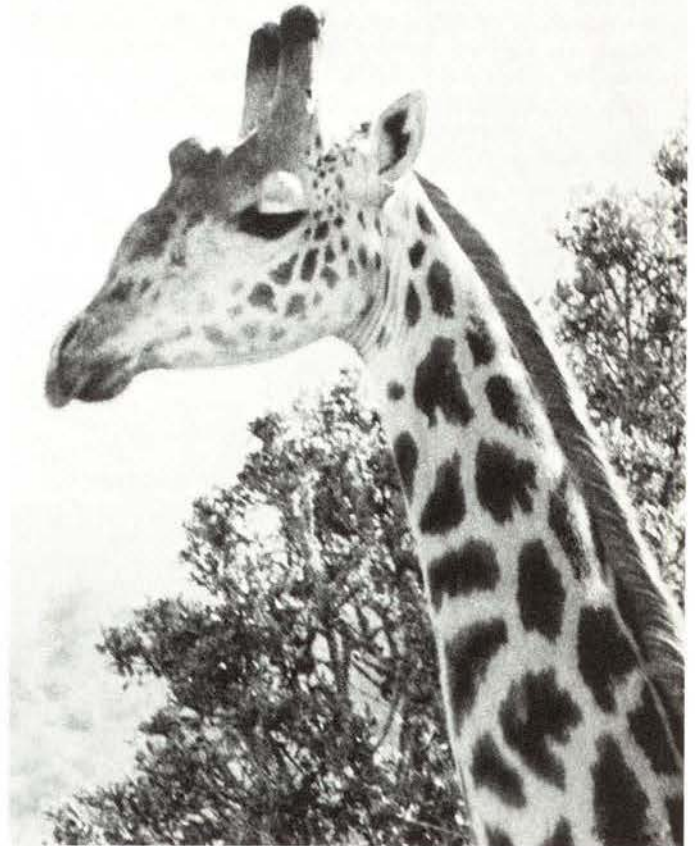
Starting and ending in Nairobi, we will visit game-rich areas, lakes and foothills of Mount Kenya. Leader, Bill Nordstrom, 2775 SW Sherwood Dr., Portland, OR 97201. Limit 16, cost approximately \$1375 plus air fare.

Strawberry Fields Base Camp, Jamaica (608) March 6-20

Spend two weeks in rural Jamaica, camped away from large cities, swimming the warm Caribbean waters, hiking, exploring and sightseeing. Leader, Dick Barton, 616 Walton Ave., Mamaroneck, N.Y. 10543. Limit 30, cost approximately \$320 plus air fare.

Trisuli/Gatlang Trek, Nepal (612) March 21-April 20

Rhododendrons in bloom, spring bird migration and a stay at Tiger Tops highlight this moderate Spring trek. Leader, Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611. Limit 15, cost approximately \$1250 from Kathmandu.



Betty Pollock

Malaysia (600) April 1-May 1 and (642) November 1-30

Boating on magnificent rivers, stalking big game with camera, unequaled birding, mountain climbing, swimming and camping—in the great rain forest and on South China island shores from Bangkok to Singapore. Leader, Tris Coffin, 500 Tamalpais Ave., Mill Valley, CA 94941. Limit 12, cost approximately \$1050 plus air fare.

Arun Valley Trek, Nepal (610) April 11-May 14

In eastern Nepal at 7500 ft., the Arun Valley is a naturalist's dream—isolated, deeply forested and sparsely populated. Leader, Peter von Mertens, 9 Mellen St., Cambridge, MA 02138. Limit 15, cost approximately \$1210 from Kathmandu.

Walking in Scotland (616A) May 29-June 13 (616B) June 15-30

Two weeks in the Highlands will take us over braes and burns, down straths and green glens and over heather-clad moors and mountains. Leader (A), John Ricker, 2950 N 7th St., Phoenix, AZ 85014; (B) Lynne Simpson, 2907 Pine St., Berkeley, CA 94705. Limit 15 each, cost approximately \$470 plus air fare.

Walking in England's Westcountry (617A) June 2-14 (617B) June 16-28

Walk on the moors past hedged fields and stone farmsteads and along the cliffs that ring the sea in the west country. Coordinator, Wayne Woodruff, P.O. Box 614, Livermore, CA 94550. Limit 11 each, cost approximately \$640 plus air fare.

OTHER 1975 WILDERNESS OUTINGS

More than two hundred other outings will be described in the Annual Outing Issue of the Sierra Club Bulletin, which will be sent to all members in early January. Included will be many more trips in almost every category . . . knapsack trips, boat trips, highlight, burro, education, bicycle and family trips. Information about these outings is not available in the club office at this time.

Arctic Circle (618) June 15-July 4

All north of the Arctic Circle, we will travel from the Lofoten Islands to North Cape, Norway, then hike in Lapland and the Swedish National parks. Leader, John Ricker, 2950 N 7th St., Phoenix, AZ 85014. Limit 12, cost unavailable.

Colombia/Peru Archaeological (620A) June 21-July 29 (620B) June 28-August 5

Camping on Pacific beaches, mountain tops and in villages, we will explore both famous and little known archaeological sites. Leader, Howard Mitchell, 65 Hillside Ave., San Anselmo, CA 94960. Limit 20, cost approximately \$1100 plus air fare.

Israel and the Sinai Peninsula (615) June 23-July 23

The desert wilderness of Sinai, high mountains and hidden oases, Israel's nature reserves, ancient cities and Jerusalem. Hot weather hiking. Leaders, Ron Eber, Dept. of Urban Planning, Univ. of Oregon, Eugene, OR 97403, and Larry Schwartz in Israel. Limit 37, cost approximately \$800 plus air fare.

Kashmir Himalaya (624) July 17-August 13

Hiking in the Sierra-like mountains surrounding the Vale of Kashmir, followed by houseboating in Srinagar and a visit to Kathmandu. Leader, Doug McClellan, 88 Ridge Road, Fairfax, CA 94930. Limit 15, cost approximately \$1,300 from Srinagar.

Kenya: Northern Frontier (621) July 20-August 16

This trip sweeps from Tanzania to Lake Rudolph, and offers a great variety of scenery, tribal villages and wild animal and bird life. Leader, Ross Miles, 18 Farm Rd., Los Altos, CA 94022. Limit 20, cost approximately \$1400 plus air fare.

Galapagos Islands, Ecuador (622) July 31-August 20

We will see, as did Darwin, the unique and unusual plant

and animal life and stark beauty of these remarkable islands. Leaders, Charles Schultz, 14 Pacheco #7, San Rafael, CA 94901, and Steve Anderson. 2 groups of 10, cost approximately \$1100 plus air fare.

Norway (630) August 10-30

The rolling Hardanger Plateau and the rugged Jotunheimen will be the site for this three-week hike. Leader, Raleigh Ellisen, 2720 Elmwood Ave., Berkeley, CA 94705. Limit 15, cost approximately \$550 from Bergen.

Trekking in the Matheus Range, Kenya, East Africa (017) September 7-October 4

Walking through the Matheus Range in the Northern Frontier District of Kenya—a camel safari. Coordinator, Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611. Limit 15, cost approximately \$1300 plus air fare.

Annapurna Circle Trek, Nepal (635)

September 27-October 30

Circling the Annapurna, Lamjung and Ganesh himals, we hope to visit fabled Muktinath to climax a strenuous 25-day trek. Leader, Doug McClellan, 88 Ridge Rd., Fairfax, CA 94930. Limit 15, cost approximately \$1300 from Kathmandu.

Kanchenjunga Trek, Nepal (640) October 25-November 30

This strenuous trek will explore dense forests and visit villages of the 14,000 ft. ridges of Kanchenjunga in the extreme northeast corner of Nepal. Leader, Wayne R. Woodruff, P.O. Box 614, Livermore, CA 94550. Limit 15, cost approximately \$1400 from Kathmandu.

Angel Falls, Venezuela (647) November 9-22

Angel Falls is the world's highest waterfall and our destination via dugout canoe. Leader, Ted Snyder, 2 Whitsett St., Greenville, S.C. 29601. Limit 10, cost approximately \$1275 round trip from Miami.

Mountains of Tassili, Sahara, Algeria (033) November 13-December 1

A camel trek to the paintings in the Tassili Mountains of the Sahara. Coordinator, Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611. Limit 15, cost approximately \$1285.

FOREIGN UNDERWATER EXPLORATION

Galapagos Islands, Ecuador (686) June 12-July 5

These barren, beautiful islands and the life they sustain contrast with the undersea life accessible to divers. Leader is a marine biologist who has done research in the Galapagos. Leader, Lou Barr, Box 361, Auke Bay, AK 99821. Limit 10, cost approximately \$1640 (\$1340 for non-divers) plus air fare.

Grand Cayman, British West Indies (683) June 15-26

An hour from Miami, Cayman is simply the best. Beginning divers can soon explore the shallow reefs while experienced divers visit the deeper ones. Basic scuba course leads to NAUI certification. Leader, Steve Webster, Box 293, La Honda, CA 94020. Limit 15, cost \$680 (\$555 for non-divers) plus air fare.

Grand Cayman Tropical Reef Biology, B.W.I. (685)

June 27-July 8

A college-level course for casual or credit participation offers illustrated lectures and daily diving field trips. Open to scuba divers including those certified on Trip 683. Leader is a Ph.D. marine biologist. Leader, Steve Webster, Box 293, La Honda, CA 94020. Limit 15, cost \$680 (\$555 for non-divers) plus air fare.



Philip H. Loughlin

RESERVATIONS ON SIERRA CLUB TRIPS

RESERVATION INFORMATION

Our trips are open to Sierra Club members, applicants for membership and members of organizations granting reciprocal privileges. Children under 12 need not be members.

Reservations are generally accepted in order received; however, some trips require the leader's acceptance of each applicant. If this requirement applies, it will be noted in the Bulletin write-up or in the trip supplement.

One reservation form may be used by an individual or by a family to apply for each trip. Here 'family' means parent(s) and their children under 21. Other family members must submit separate applications and deposits.

You may include new membership applications and fees with your outing application. Please do **not** include other dues or book orders.

PAYMENTS, CANCELLATIONS, REFUNDS AND TRANSFERS

Generally, everyone pays the same price for a trip. Children are not entitled to a reduced price except on special family outings which are listed in the write-up. If you must cancel a confirmed reservation or a space on a waiting list, please let us hear from you promptly.

North American Trips

Send in \$25 with each family or individual reservation application. The reservation deposit is applied to the total trip price and with few exceptions is non-refundable. Some trips may require a larger deposit; check the individual trip description for this information.

The **balance of the trip price** is due 90 days before the beginning of each trip. Payments for trips that require the leader's acceptance of each applicant are due at this time regardless of the applicant's status. You will be billed before the due date. If payment is not made on time, your reservation may be cancelled.

Refunds following cancellation of a confirmed reservation (less the non-refundable deposit) are made as follows: 100% up to 60 days before the trip begins; and 90% during the 60-day period before the trip begins. Refunds are based on the date notice of cancellation is received by the Outing office. No refund will be made if you leave during the trip.

If you have a confirmed reservation and wish to **transfer** to another trip, a \$25 transfer fee will be charged unless your reservation application is still pending the leader's acceptance or if you are on a waiting list.

Foreign Trips

There are no 'family' reservations on foreign outings, so send in \$50 per person with your reservation application. This reservation deposit is applied to the total price and with few exceptions is non-refundable. An additional payment of \$200 or more is due 6 months before the trip begins.

The **balance of the trip price** is due 90 days prior to trip departure. Payments for trips that require the leader's acceptance of each applicant are due at this time regardless of the applicant's status. You will be billed before the due date. If payment is not made on time, your reservation may be cancelled.

Refunds following cancellation of a confirmed reservation (less the \$50 per person non-refundable deposit) are made as follows: 100% of any payment up to 6 months before the trip begins or if you cancel within 6 months of trip departure and the vacancy created is filled from the waiting list. If no replacement is available, costs and overhead will be deducted from the total payment, and the refund will be made after the trip is completed. Refunds are based on the date notice of cancellation is received by the Outing office.

A **transfer** of a confirmed reservation from a foreign trip is treated as a cancellation. Refunds are made under the cancellation policy stated above.

ADDITIONAL CONDITIONS

Reservations are subject to additional conditions relating to transportation, emergency evacuation, and conduct during a trip. A complete statement accompanies each reservation acknowledgment and is available upon request.

FULL REFUND

Refund of the reservation deposit and all payments will be made only under the following conditions: 1) if a vacancy does not occur or if a person cancels off a waiting list; 2) if a reservation is not accepted or 3) if the Sierra Club must cancel a trip.

Mail checks and applications to: SIERRA CLUB OUTING DEPT., P.O. BOX 7959, SAN FRANCISCO, CA. 94120
Mail all other correspondence to: SIERRA CLUB OUTING DEPT., 220 BUSH STREET, SAN FRANCISCO, CA. 94104

MEMBERSHIP NO. (CHECK BULLETIN LABEL)			Trip number	Trip name	Departure date
Print Name:	FIRST	LAST	DEPOSIT ENCLOSED	(Leave blank)	No. of reservations requested
Mr. Mrs. Ms.			\$		
Mailing Address			If you have already received the trip supplement, please check. <input type="checkbox"/>		
City	State	Zip Code	Residence telephone (area code)		Business telephone (area code)
PLEASE PRINT YOUR NAME AND THE NAMES OF ALL FAMILY MEMBERS GOING ON THIS OUTING			Age	Relationship	Membership No.
					How many national trips (not chapter) have you gone on?
1.					
2.					
3.					
4.					
5.					
6.					

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1975 CATALOG

**MOUNTAIN TRAVEL (INC.)
Albany, California 94706**

OCEAN LIVING— THE NEW FRONTIER

The Ocean Living Institute has been formed to conduct and promote research in oceanography and independent self-sufficient forms of community living on the ocean. It will encourage individuals and business firms to form investment groups to fund construction and operation of ocean based industries, serve as a clearinghouse for ocean living contacts, publish information on legal and other aspects of oceanic settlement, publish information on new concepts in oceanography, aquaculture, and oceanic settlement, and conduct tests on new concepts and devices.

The institute is a non-profit corporation and contributions of cash and supplies are deductible for federal income tax purposes. The institute is in the formative stages, and is especially interested in hearing from people who can help to develop it.

Further information is available from, and contributions should be sent to:

OCEAN LIVING INSTITUTE
23 River Road
North Arlington, New Jersey 07032

NEWS VIEW (Continued)

be lethal material in the core, with less time for safety mechanisms to work, and the diversion problem in that there would be more bomb-grade material in circulation); and

"(3) The breeder program is severely unbalancing the entire federal research and development budget by absorbing so much funding that too little is left to solve problems with existing reactors and to develop alternative sources of renewable energy."

Directors urge Interior to protect Alaskan lands

The Sierra Club's directors urged the Secretary of the Interior to retain federal ownership of all public land in Alaska under consideration by Congress for addition to the four national conservation systems—regardless of whether the land is being claimed by the State of Alaska or by other parties.

The directors pointed out that the Alaska Native Claims Settlement Act directs the secretary to reserve up to 80 million acres of public land in Alaska for submission to Congress as proposed reservations of national interest.

In September, 1972, however, the Interior Department permitted the State of Alaska to select millions of acres of national-interest lands that previously had been reserved for potential protection. The state has now asked that its 1972 selections be patented by the Interior Department as soon as possible.

The Interior Department has also made additional withdrawals for native selection in such a manner as to avoid congressional review of the national interest in the land.

"The public land in question should not be relinquished by the United States before congressional review and approval," the directors said.

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THOMAS M. BILLINGS, JR.
Box 40451 C, Indianapolis, Ind. 46240



EDITORIAL (Continued)

ment of resources. To the extent that each discipline claims to be a study of the whole, it will have to take into consideration the teachings of the other.

Sierra Club spokesmen need to learn the language of environmental economics. Therefore, the Sierra Club is establishing a national economics committee that will serve as a panel of advisers to the club on the economic implications of club's policies. Further, we need to establish in each chapter an economics committee to act as a reservoir of expertise for advice and aid in the preparation of testimony on the local level. We are anxious to receive the names of both economists and noneconomists who are concerned with environmental economics. Please send your suggestions for nominees to this important new club effort to The Secretary, Sierra Club, Mills Tower, San Francisco, California 94104.

ALASKA REPORT (Continued)

taken at an all-overland (i.e. Canada) route for the oil pipeline, and thereby avoiding potential damage to the fisheries along the marine segment (Valdez-West Coast). He also suggested that one way to ease the Japanese fishing pressure on the high seas fisheries would be to deny Japan state tim-

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ber, oil and gas, coal, and other coveted resources. During the campaign, Hammond has said he favors a go-slow policy regarding further oil and gas development (on Bristol Bay OCS, for example) until Alaskans can control the impact of the present pipeline.

As a result of his public questioning of the sacred Alaska cow of development, Hammond has been exorcised by the all-out development wing of the Republican party. Republican Senator Ted Stevens, noted for his discovery of "extreme environmentalists" in Alaska, supported Walter Hickel in the primary, and accused Hammond of believing in the "zero-growth" policies of the Sierra Club. Yet the former Fish and Wildlife Service biologist may have reached a large number of Alaskans who are having second thoughts about the desirability of a continuous developmental boom, especially one primarily controlled by "outside" forces. These supporters do not expect a drastic change in state policy should he win in November, but they have been promised a more moderate, skeptical approach to the hell-for-leather development, which has been urged for so many years by the majority of the state's political leaders, and which now threatens to bring radical changes to the land and communities of Alaska.

Jack Hession

Statement required by the Act of Congress of August 24, 1912, amended by the Acts of March 3, 1933, July 2, 1946, June 11, 1960 (74 STAT.208), and October 23, 1962, showing the OWNERSHIP, MANAGEMENT AND CIRCULATION of the *Sierra Club Bulletin*, published ten times yearly at San Francisco, California—for December, 1974.

1. The names and addresses of the publisher, associate editor, and executive director are: Publisher: Sierra Club, 1050 Mills Tower, San Francisco, California; Associate Editor: Roger Olmsted; Executive Director: Michael McCloskey.

2. The owner is the Sierra Club, an incorporated non-profit membership organization, not issuing stock; Kent Gill, President, 1144 Princeton Place, Davis, California 95616; E. Paul Swatek, Treasurer, 28 Fairfax St., Burlington, Massachusetts 01803.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amounts of bonds, mortgages, or other securities are: NONE.

The average number of copies of each issue of the publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was 114,500.

(Signed) Roger Olmsted

Sierra Club TV Special Coming December 2

On Monday, December 2, the Sierra Club will present an hour-long special documentary on America's *Wild Places* over the NBC Television network at 8:00 p.m. (7:00 p.m. central). Hosted and narrated by Paul Newman and Joanne Woodward, *Wild Places* brings an entirely new dimension to the Club's program of wilderness ethic education.

The film focuses on the Club's attitudes toward our remaining unspoiled wilderness, on the values of these "wild places," and the need for their preservation. Major segments of the program were filmed in Alaska's Wrangell Mountains, the Pacific Coast of Washington's Olympic Peninsula, Utah's Slickrock Country, the Boundary Waters Canoe Area in Minnesota, and South Carolina's Congaree Swamp.

The Club's first documentary, *Wild Places*, is the culmination of two years of hard work in association with Lee Mendelson, a highly respected independent television producer best known for his many *Charlie Brown* specials. We are sure that *Wild Places* will be an exciting and lively adventure.

Save Yosemite

"These temple destroyers, devotees of ravaging commercialism seem to have a perfect contempt for Nature, and instead of lifting their eyes to the God of the Mountains, lift them to the Almighty Dollar." John Muir, founder of the Sierra Club, so characterized in 1912 the proponents of damming the Hetch Hetchy Valley in Yosemite National Park. If Muir were alive today, he might have similar feelings about the Music Corporation of America, which poses the most recent threat to Yosemite (see October *Bulletin*).

The Club has formed a Yosemite Task Force to coordinate efforts against MCA's plans, which include increased commercial activity in the Park and the "modernization" of Curry Village with 150 motel-style units.

SAVE YOSEMITE bumper stickers are available from the Task Force (suggested donation, \$1.00). If you would like a bumper sticker, or if you would like to contribute to the Yosemite cause, please write to:

Yosemite Task Force
Sierra Club, 1050 Mills Tower
San Francisco, Calif. 94104

Make your check payable to Sierra Club Foundation-Yosemite Task Force Fund. Contributions are tax-deductible.



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The Light Wings of Life



Let these fine original prints by Ron Jenkins, "Wood Ducks" and "Eastern Goldfinches," be your fireside companions for those stormy indoor winter evenings ahead.

Purchase of these prints, now being offered to Sierra Club members, will also benefit our many endangered wildlife species. Prints of both subjects, copyrighted by the National Wildlife Art Exchange, have been donated to the Sierra Club Wildlife Committee. The proceeds from their sale will be used to further the committee's many worthwhile educational and legislative activities.

Both of these gallery-size prints have been hand-numbered and signed by the artist. All prints are

printed in non-fading inks on 100 percent Rag N.W.A.E. water-marked paper. "Wood Ducks," 20" x 16" in size, has been printed in an edition of 2000 copies; "Eastern Goldfinches," 20" x 24", in an edition of 1000.

The noted wildlife artist Ron Jenkins combines years of wildlife observation with a lifetime of perfecting his skills with the brush. He writes, "To capture with my brush and thus examine a special moment in time and in minute detail is my way of seeing and sharing a split-second of time over again. Wildlife today needs all the help it can get. If I may be able to portray our wildlife world correctly in pictures, perhaps it will create some awareness of its true beauty and value to our planet."

We hope that you—or the recipient of your gift during the season ahead—will value these prints, permanent images of a fleeting beauty. Our wildlife world will be the better for it.



Prints may be ordered prepaid from the Sierra Club National Wildlife Committee, Box 2471, Trenton, N.J. 08607.

"Wood Ducks": \$29.00; "Eastern Goldfinches": \$64.00