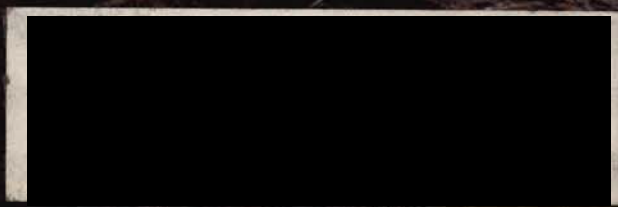


Sierra Club Bulletin



February 1975

Smog and Politics
in Los Angeles



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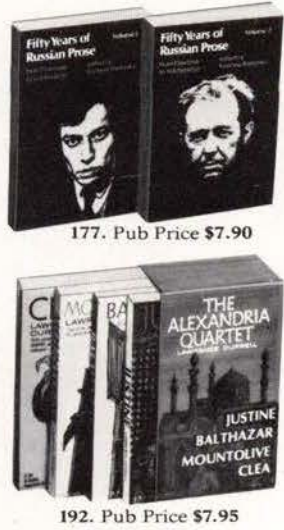
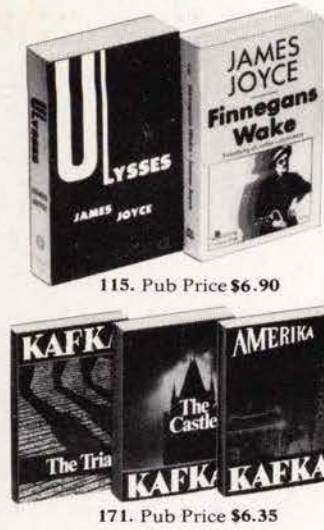
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Cover: Ski touring, an increasingly popular sport in more gentle countryside, has more than its share of ups and downs in the Mt. Whitney region of the Sierra. Here Galen Rowell has caught his ski-mountaineering companions silhouetted against the snowy base of 13,000-foot Mt. Hale as they cross an icy stream at the beginning of the spring thaw.

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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"How many men, how many planes, how many changes would it take to destroy the remote experience we were having in this alpine sanctuary?"

A Vertical Mile in the Alaska Range

GALEN ROWELL

THE ALPINE INTERIOR of the Alaska Range is a world few of us realize exists on earth: ice, rock, snow, and sky, each element in overpowering, oceanic quantities. It is nearly monochromatic. There are no greens. Yellows and reds come only at sunrise or sunset. The scene is white, gray, and blue.

Giant rhythms distort normal perceptions. Thoughts resemble recordings played at too slow a speed. We humans have natural clocks, reset each day by sunrise and sunset, high noon and stars. June in the Alaska Range has 20-hour days followed by a brief, starless twilight. Near the solstice, weather permitting, the sun shines 24 hours on the summit ramparts of Mount McKinley, where its 20,320-foot bulk captures light beams aimed at the arctic circle, nearly 200 miles north. Well informed as we are on travels to the moon and the planets, most of us have only a dulled comprehension of this land in our own nation. Mount McKinley's great shadow scribes a daily arc over thousands of square miles of primeval landscape in which man's footsteps are still less common than in the rest of America before Columbus.

Only once, in 1903, did man follow the Great Shadow's arc around Mount McKinley. Frederick Cook, a driven, eccentric doctor, spent 54 days "circumnavigating" the mountain, climbing to 11,000 feet, descending into glacial gorges, crossing rivers, icefields, and tundra. No one has repeated Cook's journey, possibly because he fell into the lowest esteem ever accorded an explorer in history. In 1906 Cook faked the first ascent of Mount McKinley.

"There's Cook's fake peak," yelled Don Sheldon above the drone of his supercharged Cessna 180, banking a wing only a hundred feet above a pathetically small granite tower a dozen miles from the true mountain. The peaklet was less than 6,000 feet high but many miles into the heart of the icy Alaska Range. To reach it in 1906 required a major expedition, an undertaking far greater than today's air-supported ascents of McKinley's oft-climbed West Buttress. Cook had been the first person to travel through the Ruth Gorge, an Alaskan replica of how Yosemite must have appeared in the Pleistocene. Granite peaks tower above a deep gorge filled by the Ruth Glacier, which Cook named for his daughter. True to the giant rhythms, cliffs, glaciers, and distances are all much greater than they appear. We had come to attempt the first climb of the highest cliff in the gorge, the 5,000-foot southeast face of Mount Dickey.

Sheldon's plane droned on, days of foot travel compressed into



(Left) Storm clouds close in around the Moose's Tooth and prepare to envelop Mt. Dickey. (Above) On the final day of the climb Ed Ward's beard gives evidence of some difficulties with the weather.

Galen Rowell is author of *The Vertical World of Yosemite*. He will participate this summer in the American K-2 expedition, which will attempt to climb the second highest peak in the world.

minutes of flight. There were three of us: Dave Roberts, Ed Ward, and myself. Between us we had more than 20 expeditions to the North under our belts. Even so, the sight of Dickey was terrifying. From its icy summit, granite walls dropped a vertical mile to the surface of the Ruth Glacier, and an unknown distance below.

We flew close to the wall. Snow-covered ledges faced us like windows of a high-rise apartment. They gave us confidence, as places to rest on the climb; and fear, as potential traps in a long storm. More than 80 feet of snowfall has been measured in a season. Much of the snow on those ledges had only recently been salt water in the Gulf of Alaska, perhaps lapping the sides of a Japanese fishing boat or roaring up the Cook Inlet with the tide. The snow ledges were a stone's throw from the plane, but actually a hard week's work away.

We landed at Sheldon's "Mountain House," a tiny cabin on the Ruth Glacier, the only building for 50 miles. "Don't mind the Father's language," Sheldon warned as he left us. "He worked as a deckhand on a salmon boat." Father Dunphy was a Catholic priest. His church was the Ruth Glacier, and his parish those who came to see it. He was a maverick, not content to go where society ordered him. Ordained for 22 years, he had also worked as a college dean, as a Mont-

A photographer never gives up: from 30 feet down in a glacial crevasse Galen Rowell documents his own rescue.



gomery Ward security guard, as a wrangler, and now, as a grubstaked caretaker of a mountain cabin. He wanted peace and quiet. He got bottles of liquor and television interviews.

We left the Mountain House at 2 A.M. to climb Mount Dickey by the easiest north side and place a cache of tent, food, and ice axes on the summit. Crevasse danger along the way was exceedingly high. At 6 A.M. an invisible snow bridge collapsed beneath my skis. It happened too quickly to scare me. The rope drew taut the instant my skis bottomed on a snow shelf inside the crevasse. Unhurt, I stared 30 feet overhead to a hole in the roof of the icy trap. Only fate had stopped me from hitting the hard ice nearby. With mechanical ascenders, I escaped on a rope that Dave and Ed anchored above. Continuing the climb, the weather gradually enclosed us. Heavy snow was falling as we approached the summit ridge. We left our cache and descended, marking our route with willow wands tagged with red ribbons. After a stormy night on a col, we continued our descent down the opposite side of the mountain from Sheldon's cabin, reaching a campsite under the giant cliff where we received an airdrop of further supplies. Through several days of poor weather we waited to begin the climb.

Brad Washburn, an expert on Mount McKinley, wrote the following advice to prospective Alaskan mountaineers: "Few parties have experienced long spells of clear, calm skies. The best climbing strategy has always proved to be to maneuver one's party as high as humanly possible in bad or mediocre weather; then to move *fast* both up and down when the clear break comes." Washburn was talking about snow mountains, not rock walls. We could not begin the climb in bad weather. Our strategy would be to do the entire climb quickly when a clear break came. This meant leaving behind equipment that was not positively essential. A manual of climbing written in an armchair might suggest that we bring tents to wait out storms, extra food, ice axes and crampons for the alpine conditions near the summit, extra water, an extended first aid kit, and perhaps a radio—items that could easily decrease our margin of safety. We had to be mobile; to move through the mountains defenses and dangers for 18 hours a day with speed and de-

cisiveness. It was not unlike the problem facing a person who wished to cross a freeway on foot on a dark night. Better naked and fleet of foot than the false safety of plodding caution.

On Sunday, July 14, we spent all day climbing a sixth of the route. We fixed our 800 feet of rope and descended just before a storm broke. The day had been deceptive: warm shirt-sleeve weather and firm, dry granite, like summer in the Tetons. Dave later wrote, "If we got no higher than this . . . we'd have had one great day of climbing, the like of which whole expeditions starve themselves for in the Alaska Range." There was only one natural campsite on the vast glacier, a Shangri-La in the relentless icy world. Base Camp was secure and friendly—warm clothes, level glacier, no bugs, no rockfall, no avalanche danger, plenty of food, and books to read. Boulders and gravel lay strewn on top of the ice, the beginnings of a lateral moraine. A flat, ten-foot rock was our kitchen, and a stream flowed into a deep blue pool nearby. On one side, the sheer walls of Dickey rose a vertical mile; on the other, equally sheer cliffs of an unnamed mountain, only slightly lower, formed the south wall of the natural amphitheatre.

Wednesday, July 17, dawned clear at 2 A.M. We ascended the ropes, reaching our old high point early in the morning. Our loads were the lightest I'd ever taken on a big climb, even back home in California. Depending on snow, we took little water. I had two wool sweaters and a rain parka—no down jacket. We had one tarp and one bivouac sack, one ice axe and one pair of crampons—token gestures if conditions became extreme. On the huge, complex cliff we felt like rats inside a vertical maze. Each lead was another pathway, all of which must interconnect before we could get out. One of us would lead, climb to a new belay position at least 100 feet higher, and anchor two ropes; another would climb the free rope with mechanical ascenders and begin the next lead; meanwhile the third man would clean out the hardware from the pitch below.

Our experiences were inward and rarely shared. Dave would slow down on an unpredicted section of rotten rock, but neither Ed nor I would really ever know how bad it was. We'd see it as we Jumared up the rope mechani-

cally afterward.

"Nice lead Dave."

"Thanks."

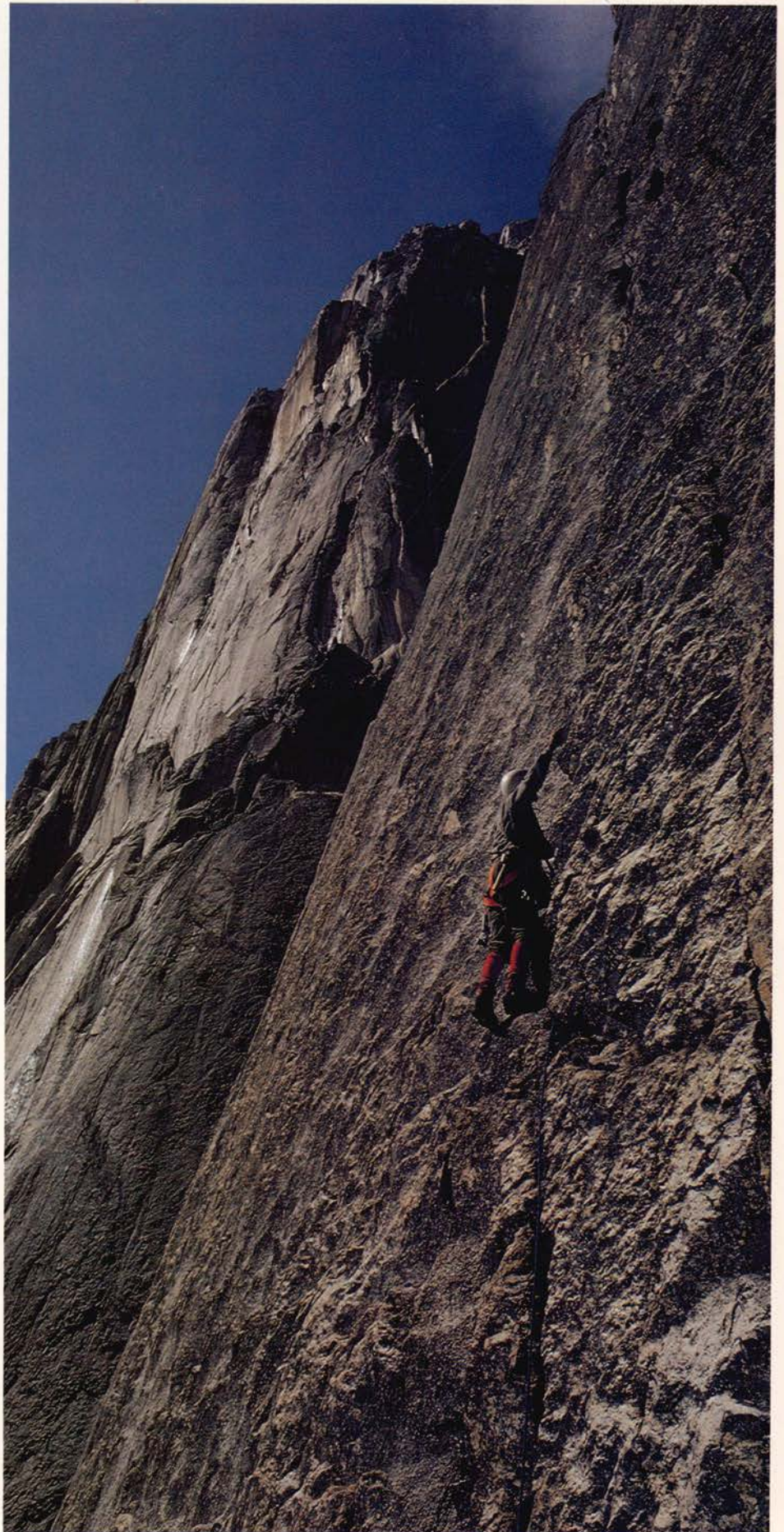
Then I'd watch Ed lead higher, back on firm rock, moving confidently, using nuts and occasional pitons for safety. His hour's hard work would again rush by me in five minutes as I climbed the rope to lead above.

Progress was relatively rapid, about 100 feet per hour. In other parts of the world this might mean six nine-hour days of climbing to make the mile-high wall. But here we had started from 800 feet and we hoped to climb for 18-hour days. Light gear, long days, and a little luck would put us on the summit in three days—in theory.

On the 20th lead, about 2,000 feet above the glacier, our mechanical ritual slowed. The rock was rotten and frostriven. A section that had appeared lower angle was desperate and dangerous. Higher, a vertical headwall of crumbly rock was broken only by a single flaw, a wide chimney hundreds of feet high. With a rope traverse, I entered the chimney and found firm rock inside. Its sides were slick with water and its few ledges covered with snow. Giant chockstones blocked progress, and one required 5.9 climbing—nearly the upper limit on dry firm rock. It thrust outward like an awning from a store and dripped water on my head from the slimy crack connecting it to the cliff. Jamming hands in the wet crack, I underclung my way to the outside edge, reaching blindly over its brow into gravel and snow. A fall seemed certain, and I backed down to a resting spot. I tried again, placing a piton driven into the crack near the lip. With confidence that the fall would be short, I moved upward, frictioning my boots on the flaring walls of the chimney. They held and I soon had a death grip on a blocky handhold. The absolute clarity with which my mind had focused on the mini-battle soon diffused into dull anxiety about our progress.

In the ten-o'clock twilight, Ed completed a difficult pitch, and we stopped on a comfortable ledge. We cooked food and talked optimistically about our progress: 27 pitches—halfway up the climb in a single day, with, of course, an 800-foot head start of fixed lines. We dozed under a clear sky.

The sunrise aimed through slots in thick clouds to spotlight summits with an eerie orange phosphorescence. A



Galen Rowell



The gateway of the Ruth Amphitheatre at the head of the Ruth Gorge.

Galen Rowell

storm was upon us. Yesterday we'd seen occasional cirrus clouds, moving from the south like a giant migration of geese. The clouds had worried me, but Dave and Ed claimed that in the fickle Alaska Range they were not sure signs of a storm.

In the gloom of the four-o'clock dawn we discussed whether to abandon the climb. Valleys to the south were now locked in cloud and streamers of white mist crept up the Ruth Glacier, lapping the base of our mountain like the breath of an unseen dragon. Descent might not be possible if the storm iced the ropes, but ascent was even less sure. The rock mazes of Yosemite stay constant, while here the problems were changing as we solved them. Psychological commitment, not logic, kept us moving up.

The vastness was suddenly gone, replaced by dank confinement. Gone were the ice highways, twisting through distant gorges. The sky was depthless gray, as was the air below

our feet. We climbed into an amphitheatre, surrounded by overhanging rotten walls. The rock was bad again, so bad that I could actually chop steps with my alpine hammer.

The only way out of the amphitheatre was to climb the right skyline. Dave led to a ledge beneath a steep headwall. On the next lead, he mistook my call for "slack" to be a warning of "rock!" Instead of feeding the rope, he pinned me for life's longest seconds on rotten rock high above a dubious safety anchor. Finally, Dave understood my yell. Neither pitons nor nuts seemed safe for anchoring the rope. Imagine a floor covered with marbles. Make the marbles bottomless, glue them together in some weak fashion, tilt the angle to 60 degrees and you have a rough approximation of the difficulties. Even in chopped steps my feet seemed insecure. One hundred feet took more than two hours. Clouds made the rope below seem to disappear in space. I reached

a ledge, both a triumph and a trap. The cliff above was vertical and blank.

Ed had a perpetual smile on his face, like a child going to his first circus. I thought he didn't understand the gravity of our situation. I had a dull feeling that we'd done something irreversibly wrong, a feeling one might have after foolishly breaking a priceless heirloom. But Dave's notes on the climb had a similar appraisal of me: "Would Galen . . . keep that blithe cheerful countenance to the end?" I began to understand why politicians smile.

Ed was still smiling when I lowered him around the corner into the invisible gloom. His voice, now more cheerful than his face, warmed our souls: "Perfect rock. It goes!"

Throughout the climb we could find no correlation between the good and bad rock. We knew that the bad rock was shattered by exposure to the elements, but good rock, the same quartz monzonite, was often side by side on

similar exposures. The good rock was climbable even if it was overhanging. The bad rock was virtually impossible when it approached the vertical.

We were lucky to escape the amphitheatre before the storm. A few hours' delay, and the rock might have been plastered with snow. We climbed all afternoon on fine rock, wondering when the storm would begin, hoping its slowness was not an indication of size. At 6 P.M. rain began. Dave climbed a steep, wet crack, and I climbed another. By early evening we stopped on a giant ledge about 1,000 feet below the summit.

Rain turned to snow. Wind began to blow. An Alaskan blizzard had begun. Dave covered himself with the tarp and slept in a small nook. Ed crawled into the bivouac sack, exposed on a ledge. Covered with snow and curled in fetal position, Dave said Ed "looked like a victim's body discovered by rescuers." I wriggled into a natural coffin under a boulder. Protected from the wind, but open to blowing snow, I spent the night in a spot so cramped that if the rock shifted half an inch, I might not have gotten out. Sleep came slowly and my thoughts drifted.

If we were successful, would our climb be considered just another gymnastic feat? Another El Capitan-in-Alaska to be compared with flagpole-sitting?

Would failure, by a hairsbreadth or a calamity, make us look foolish to have attempted the climb? We asked no rescue, and none was expected. How different our situation might be if, as in Switzerland, a *téléphérique* went up Mount Dickey and even now a rescue crew was lowering a cable. How many men, how many planes, how many changes would it take to destroy the remote experience we were having in this alpine sanctuary?

MOUNT DICKEY, unlike the summit of nearby Mount McKinley, is not in a national park. It is currently unprotected, but part of a large southern extension proposed for Mount McKinley National Park. On an earlier expedition I saw no threats to the lands of the southern extension. I suspected that a national park, with the minimal development that always comes in its wake, might be more damaging to the region than leaving it alone.

I've changed that opinion. I now

realize how my mind romanticized the Yosemite comparison: the Ruth Gorge is Yosemite in the Pleistocene epoch; its ice hasn't melted; most of its peaks are unnamed; no one goes there, except for a few brief summer weeks. In overt contrast are the stores, golf course, jail, and bank of the California Yosemite. A national park in the Alaskan Yosemite seemed grossly premature. Now it is obvious to me that development throughout post-pipeline Alaska is just as premature. The time for parkland is now.

Grant Pearson, a man who climbed McKinley and later became its park superintendent, writes that the Alaska he knew in the 1920's seemed to say, "Carve out of me what you will, but don't ask for help. If you can take it, it's yours." The symbolic impact of the pipeline may prove of more long-term importance than its immediate environmental impact. Like generals arriving in an open touring car, the completion of the pipeline signals the success of a foreign invasion. Perhaps the Indians had enough foresight to see the transcontinental railroad in the same light. One result is certain: as more people come to Alaska, more decisions will be forced by the economics of jobs, energy, resources, and recreation. Fewer decisions will be derived from environmental priorities.

McKinley Park is not plagued with the excess development so common in national parks in the Lower 48. Although partly due to harsh climate and remoteness, a large share of the credit must go to its early superintendents. Three of the first four were men who climbed Mount McKinley. They had a more genuine appreciation for the land than most modern park managers, who acquire their jobs by administrative musical chairs. Most of today's important park decisions come from Washington, but Harry Karstens, McKinley's first superintendent, was in a unique position. Not only had he led the first ascent of Mount McKinley, but he had shared in the very birth of the idea of making a national park when he wintered with naturalist Charles Sheldon a decade before its creation.

If John Muir could see Yosemite today he would certainly question the idea of national parks. McKinley Park, however, is a monument to the national park idea and the goals of Sheldon and Karstens, as they sat

around campfires in the mountain's great shadow. The only indoor accommodations are at the park boundary. Less than 100 campsites—and no other accommodations—exist along the 87-mile dirt road traversing the park. Except for those with campsite registrations, all visitors must take tour buses or walk through the park instead of driving personal vehicles. In contrast to the lifeless ice and rock of the Ruth Gorge, the park road traverses green rolling tundra and spruce forests. Control of mechanized transportation has kept North America's finest wildlife viewing area much the way it was for Sheldon in 1906. On a single four-hour drive I once saw moose, caribou, eagle, gyrfalcon, ptarmigan, porcupine, beaver, grizzly, Dall sheep, wolf and, most remarkable of all, a lynx stalking a snowshoe hare from 40 feet away.

Access is the major problem with the southern extension. Roads are not possible into the heart of the region, but I'm disturbed by an unofficial proposal to build a hotel near one of the glaciers with a *téléphérique* connecting it with civilization. One Switzerland is enough.

The use of aircraft for either landing or air-dropping supplies is forbidden in national parks. In Alaska, paper regulations on aircraft are about as effective as prostitution laws in big cities. In the great silence of the Alaska Range most of the noisy aircraft intrusions that I've experienced were from legal, sight-seeing private pilots who flew above FAA minimums and had no intention, let alone capability, of landing. Allowing bush pilots controlled access to the new parkland is preferable to outlawing their activities. Not only will air search and rescues be reduced, but in an unpredictable fashion a monopoly on bush plane traffic will be prevented.

A recent *Time-Life* book has an incredibly naive description of the building of Sheldon's Mountain House on the Ruth Glacier: "Don had flown in a total of 10,000 pounds . . . to one of the most spectacular points in the whole Alaska Range. I am convinced that he did so not for any practical reason, but because deep down he felt a need to assert his supremacy over the mountain."

Far from whimsy, the construction of the Mountain House is foresight to the time when it will be a national-park inholding, where a plane can be

landed. In a letter to Dave Roberts, Sheldon mentioned, "We received final U.S. Department of Interior patent for our building location at the 6,000-foot level. This could be a real sleeper, since they plan to extend the park boundaries to the foothills."

AFTER MY BIVOUAC in the rock crevice on Mount Dickey I peered out at a white world. A blizzard filled the air with snow. Rime ice clung to the rock above. It looked like photographs I'd seen of the Eigerwand in storm. I was wet but warm in my Fiberfill bag, and I suggested that we try to wait out the storm. Both Dave and Ed wanted to go for the summit. I was worried about technical climbing with icy ropes. Going down 4,000 feet in a storm was out of the question. We had no inkling of how long it would last. Conditions could get much worse before they got better. We agreed to continue climbing.

The evening before, I had climbed one pitch above the ledge and fixed a rope. Ed got up ten feet before his ascenders iced and slid him involuntarily back to the ledge. They were useless on our iced ropes.

Dave took the lead with the only crampons and ice axe. After two moderate leads on icy granite with Dave belaying us individually, we came to a sudden juncture with dark, stratified, metamorphic rock, held in place by ice and snow. Above, the angle averaged 60 degrees, and the surface was about half rock and half snow, although much of what looked like snow turned out to be ice. We regretted not having ice axes and crampons for each of us, but we also considered how they might have slowed us down, carrying them for 45 pitches of rock before they were needed.

How totally different from our beginning on dry rock and a sunny day! It was as if we had switched to a different mountain on a different continent. In a claustrophobic world of blowing snow we climbed roped together. Visibility was often less than 100 feet. Progress seemed like waiting in an infinite theater line. Nuts and pitons placed by the first man were removed by the last. Once, Ed broke his perpetual smile to say, "I don't like this. It seems real dangerous."

Dave exuded confidence. His clawed feet led the way over icy black rock. He smiled and made quick decisions,

as if he was totally in control of his element. He had a detailed Washburn photo of the face, now crumpled like a handkerchief, and sometimes he stopped to correlate features. As we moved higher, we found less rock and more snow. We came to a spot where everything above was white and Dave announced that we were close to the top. I belayed him while he climbed directly up steep ice that he figured was about 50 feet high. He became a dark shadow in the snowy tempest. After climbing 150 feet and seeing no end to the ice, he retreated.

Our smiles had disappeared. Dave described us as surly. Ice from his footsteps had crashed on our heads, failing to hurt us only because we wore hardhats. We were cold and disillusioned in the blowing storm, perhaps even lost. We began traversing hundreds of feet to the south, searching for a weakness in the continuous ice wall. Rock was the exception and snow the rule. We wanted rock outcrops for belays and piton protection. Our diagonal traverse angled upward and Dave occasionally stopped to belay us individually over steep sections. Unexpectedly, I slogged through deep snow and climbed over a small cornice onto level ground. Dave shook hands with me. He thought we were on top. But where? We were in a white-out.

Soon Ed joined us. At first we didn't agree on which direction to head, but we decided to blindly walk south into the storm. I gazed in disbelief at a tall flagpole with a large red flag, blowing in the wind. Who could have put such a thing near the summit of Mount Dickey, I wondered? The flagpole was a threat to my logic. It hadn't been there a week before, so we must not be in the right place. The time it took these thoughts to race through my mind was only a couple of seconds. As I took another step my perspective error was obvious. It was one of our four-foot-tall willow wands with a red ribbon, glowing from the shadowless murk of a white-out.

As we continued on, new wands appeared like tail lights out of the fog, until we came to our tiny cache. Two ice axes for the descent; one two-man tent, crowded for three; two days of freeze-dried food. These meager things were a pot of gold. Tired, cold, and satisfied, we were soon resting in the comfort of a tent pitched in a snow storm.

SIERRA CLUB ELECTION

Each year, the annual national election of the club is held on the second Saturday of April, as prescribed by the bylaws. On April 12, 1975, five directorships and a bylaw amendment will be at issue. A ballot, information brochure, and return envelope (not postage-paid) will be mailed by March 7 to each eligible member. Packets for members living outside the 48 contiguous states will be sent airmail. With the exception of junior members (under 15 years), all those listed in the club records as members in good standing as of January 31 (about 147,000) will be eligible to vote.

The ten candidates for directors are, in order of appearance on the ballot: John H. Ricker, Joseph Fontaine, Brant Calkin, E. Paul Swatek, Phillip S. Berry, Kathleen A. Bjerke, William Futrell, E. Diane Hunter, Theodore Hullar, and Ellen Winchester. Members should vote for not more than five candidates.

The information brochure will contain a statement from each candidate regarding pertinent background and his or her views as to the direction the club should take, together with a picture. It will also contain the text and arguments regarding the bylaw amendment to delete the upper age limit for student memberships.

If you do not receive a ballot by mid-March, or you mismark it, do this: Write a note of explanation to the following, and enclose the voided or mutilated ballot if you have it: CHAIRMAN, JUDGES OF ELECTION, Sierra Club, Department E, 1050 Mills Tower, San Francisco CA 94104. If addressed any other way, it will get delayed attention. After appropriate checking, an attempt will be made to send you a replacement ballot in time for it to be returned by the date of the election. This procedure is under the control of the Judges of Election. Ballots are to be mailed back to Elections Committee, Sierra Club, Post Office Box 2177, Oakland CA 94621. They will not be opened until the time for counting.

The pre-punched holes at the bottom of the ballot card will indicate to the computer that the ballot comes from a member eligible to vote. However, the unique, random number bears no relation to a particular member or membership number. Thus secrecy of voting is assured.

Lewis F. Clark
CHAIRMAN, JUDGES OF ELECTION

A Net Gain for the Porpoise

The Tuna Boycott

AS MANY AS 400,000 PORPOISES a year have been killed by the United States' tuna fleet since the early sixties, when the industry began to exploit the relationship between several species of these marine mammals and the yellowfin tuna. Although there are several methods of fishing for yellowfin, the American tuna industry has steadily converted its fleet to large purse-seiners. These vessels set their nets around a pod of porpoises because they know the yellowfin will be swimming beneath them. They immediately close the net at the bottom to trap the tuna, and as the catch is hauled toward the seiner the top of the net closes as well, thus trapping the porpoises along with the tuna. Most of the mammals die from drowning; others are crushed or mortally injured when their fins and flippers become entangled in the net.

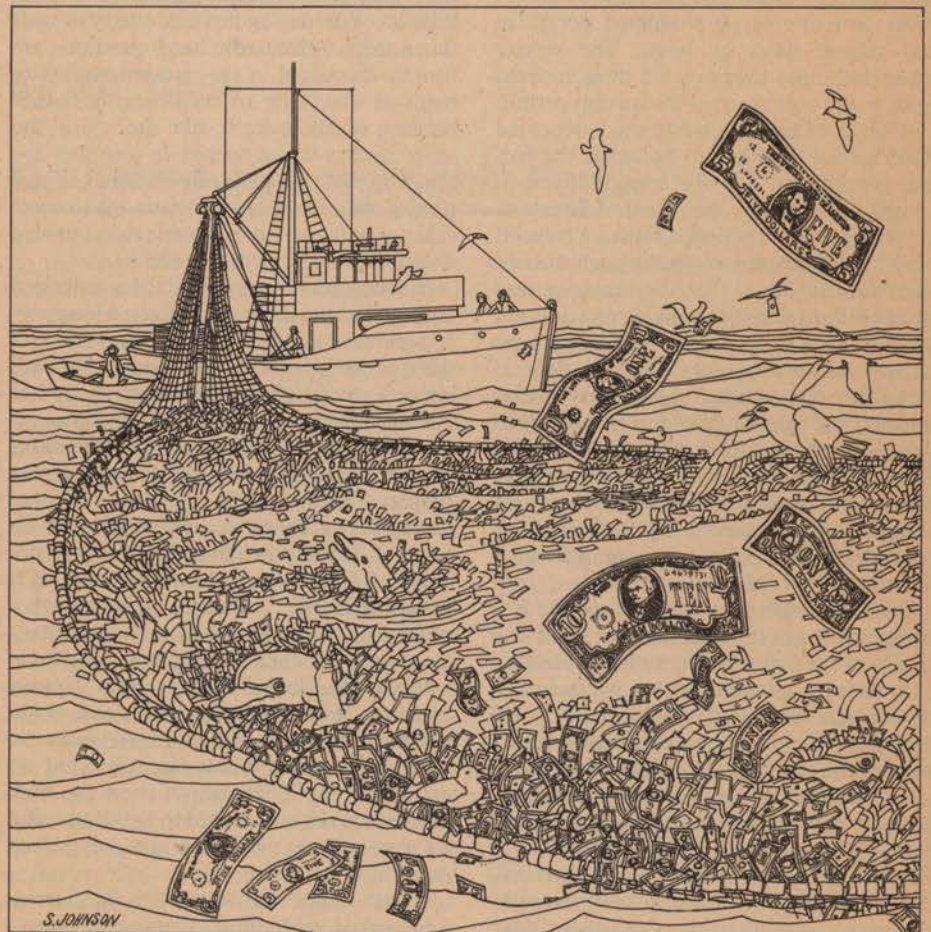
In an attempt to eliminate such needless slaughter, Congress passed the Marine Mammal Protection Act of 1972, which required the tuna industry to reduce porpoise mortality and serious injury to "insignificant levels approaching zero" and provided a two-year grace period in which to reach this goal. Working with the National Marine Fisheries Service (NMFS), which administers the law, the industry did manage some improvements and porpoise deaths were reduced. Even so, two years have elapsed since the act was passed, and neither the spirit nor the letter of the law is being observed.

Last July, the NMFS managed to circumvent the clear intent of the act by promulgating regulations authorizing the issuance of permits to purse-seiners allowing them to continue killing a certain number of porpoises. Reporting to the Marine Mammal Commission, a subcommittee of scientific advisors said that "even the most conservative estimate of porpoise mortality . . . represents an unacceptably high level both in terms of the specific charge of the Marine Mammal Protection Act to reduce the rate of such mortality and serious injury to insignificant levels approaching zero, and in terms of the overall protection and conservation policies and objectives of the act to maintain the health and stability of the marine ecosystem." The report warned that population data on the porpoises were either limited or unavailable and therefore that all numerical estimates were unreliable. In the

opinion of the subcommittee, it seemed only prudent to significantly reduce porpoise deaths in order to assure, with reasonable probability, the safety of basic porpoise populations.

The likely impact of the permit program seemed serious enough that the National Marine Fisheries Service decided to prepare an environmental impact statement under the provisions of the National Environmental Policy Act. The draft version was submitted to the Council on Environmental Quality in April, 1974. Though inadequate in many aspects, at least the statement managed to make the obvious observation that one way to significantly reduce porpoise mortality was to end the practice of purse-seining altogether. Now, the NMSF has is-

sued a permit to the American Tunaboat Association that allows the incidental slaughter of 85,450 porpoises between October 21, 1974, and December 31, 1975. Even if the fishing fleet adheres to this limit—and there is no way to know save through reports from the fishermen themselves—it is still far above the significant reduction specified in the Marine Mammal Protection Act. One spokesman for the American Tunaboat Association, who called conservationists "a bunch of fruitcakes," casts doubt on whether the fishermen would even be able to meet the permit's generous limit. He said there was nothing to worry about since only 100,000 porpoises or so would be killed this year, a figure not only unacceptable, but illegal. Presumably, when the permit figure is



reached, the tunaboats would be required to cease operations. This is unlikely to happen.

The National Marine Fisheries Service held informal hearings in December to consider new evidence. Representatives of public-interest groups as well as of the tuna industry were present. The Sierra Club was represented by a lawyer who also represented the Environmental Defense Fund. In addition, the service received more than 300 letters from persons and groups opposed to the continuing slaughter of porpoises incidental to purse-seining. For the most part, the service either ignored or committed to further study conservationists' recommendations, including one essential change in the regulations that would require independent observers on all purse-seiners to determine the exact rate of porpoise mortality. Nor did the service reduce the number of porpoise deaths under the permit, though it did increase its goal—not a quota—of a 30-percent reduction in porpoise mortality in 1975 to 50 percent.

The service also required, first, that all commercial fishermen holding a certificate of inclusion under the current permit participate in a training program to ensure that they are aware of the provisions of the Marine Mammal Protection Act of 1972, regulations based on the act, and methods they must use for protecting marine mammals; and second, that each fishing vessel station two men in a small boat at the corkline in order to extricate all entangled porpoises and release them by hand. The service scheduled more hearings for three months prior to the expiration of the current permit.

After the Sierra Club had made repeated unsuccessful attempts to persuade the federal government and the tuna industry to comply with the act, the board of directors, at its December meeting, adopted a boycott of all "light meat tuna" pending definite and significant evidence that the language and spirit of the Marine Mammal Protection Act of 1972 . . . is firmly met." This is a very selective primary boycott directed *only* at American companies (foreign tuna operations do not fish "on porpoise") and *only* at light meat tuna. (Albacore and bonito are fished by other methods that do not involve killing porpoises and are therefore not included in the boycott.) Yellowfin tuna is packed by all major tuna companies as "light meat" or "chunk light" tuna.

While the club continues to urge the federal government to implement the letter and spirit of the Marine Mammal Protection Act, it hopes all concerned consumers will observe the boycott. There is already some evidence indicating that at least two species of porpoise are suffering a significant decline in population. While they may thus qualify for full protection under the Endangered Species Act of 1973, this will help only if they have not become extinct before an accurate determination of their numbers is made.

Juanita Wint

Juggling the Impact

Oil on the Outer Shelf

ALINGERING LEGACY of the last administration's abortive energy program is the proposal for a tenfold increase in the rate of leasing lands under federal jurisdiction on the outer continental shelf (OCS) to energy companies for oil development. Concerned about the unforeseen impacts of this enormous jump in offshore oil development, the Sierra Club regards the OCS drilling program as completely unacceptable.

The Department of the Interior's Bureau of Land Management, which is responsible for leasing OCS lands, recently completed a Draft Environmental Impact Statement on the proposed accelerated program. The statement is deficient in many respects. The Sierra Club plans to testify at three hearings on the statement scheduled for early February at Anchorage, Los Angeles, and Trenton. The club will also collaborate with other organizations on written commentaries to be submitted to the Department of the Interior.

The Draft Environmental Impact Statement exhibits all the padding and muffled admission of damaging fact customary in such documents. Admittedly hard questions are usually dismissed in the two-volume statement as unworthy of consideration either because scientific truth, like the will o' the wisp, always seems to recede into the distance, or because the acute national energy need is considered desperate enough to override not only every conceivable risk, but also detailed analyses of those risks.

Yet most people are bound to have noticed that modern technology has gone a long way in seeking scientific certainty, and most, if the questions is put to them properly, will concede that continued life on earth has greater value than wasteful energy consumption. Both of these reasonable assumptions are implicit in an excellent three-part report prepared by the U.S. Senate's National Ocean Policy Study, chaired by Ernest Hollings of South Carolina. The report concludes: "The proposed 10-million-acre OCS program for 1975 should be replaced with a more realistic target based on sound management principles for publicly owned resources." California Senator John Tunney concurs: "I have a feeling that as we begin our move to develop the oil reserves in the OCS we ought to know precisely what we are doing, for if we cannot meet the high standard, at least we ought to know an awful lot more about what we are doing than presently."

Three major informational deficiencies appear to dog all efforts—state and federal

—to deal rationally with the problems associated with OCS oil and gas development:

(1) lack of dependable projections through at least the next decade of U.S. oil consumption, taking into account energy conservation, price constraints, and the development of alternative energy sources;

(2) lack of reasonably definitive information concerning the cumulative effects of oil pollution on marine life and water quality of the OCS and its estuaries and marshes;

(3) lack of information about the location and extent of oil deposits.

Both public and private entities are currently improvising scenarios that will yield estimates of how much oil and gas we really cannot do without. With regard to our ignorance of marine impacts, Secretary Morton, almost a year ago, launched a well publicized "two tier" nominating system, in which the states and environmental groups, as well as the industry, were invited to rank areas of the outer continental shelf according to their supposed oil potential and their comparative environmental risks. No environmental group was able to advance such a detailed ranking because the information needed to do so simply does not exist. Furthermore, it could only be provided through extensive federal research funding of a magnitude not yet contemplated. Yet the idea of using some form of ranking to protect marine areas of critical environmental concern, some of them as oil reserves for later use when technology has achieved greater sophistication, is widely supported.

In response to a growing demand for more research on the outer continental shelf, the draft environmental impact statement promises to extend to the rest of the OCS the kind of "baseline" studies it initiated on the "MAFLA" tract off Mississippi, Alabama, and Florida, which was leased last spring. But the MAFLA studies, far from being an inspiring model for use elsewhere, have only been a token, 60-day, single sampling around anticipated drilling sites *following* the sale, with no coastal studies as yet initiated, no provision for measuring effects of exploratory drilling, no hope for more than tokenism in a promised second phase of funding, no independent scientists on the Department's OCS Research Management Board, and no connection between the infrequent deliberations of the board and actual leasing decisions in the field.

But suppose for a moment that the Department of the Interior and the Office of

Continued on page 35

WASHINGTON REPORT

Brock Evans

The 47-Year Forest

ON OCTOBER 1, 1974, Mike Frome, conservation editor of *Field and Stream*, was fired by CBS, the magazine's owner. This action shocked the environmental community, and a steady stream of protests has continued to pour in to the CBS board chairman. Frome was no ordinary sports writer; for a decade he had been one of the most courageous, articulate spokesmen for the environmental movement, particularly on forest policies and practices. He had become an expert on forest practices in the course of numerous trips he made through the national forests in the 1960's. Year after year, he saw vast stretches of wilderness opened up to logging roads and a tremendous increase in clear-cutting in once-beautiful places. In writing about these things, he spoke for those who wished to rescue the national forests from their managers, the U.S. Forest Service, whose policies have encouraged much logging, but little of anything else. Frome also took on the timber industry, becoming one of the leaders in defeating the National Timber Supply Act in 1970. The act would have doubled the amount of national forest to be cut. It was precisely his outspokenness on forest policy that did him in. After submitting his regular monthly column, in which he severely criticized the forest service's so-called "Environmental Programs for the Future," the latest long-range program for forest management, he lost his job.

The Sierra Club is also critical of the "Environmental Program for the Future," whose name is a misnomer and deception. The document is not an environmental program at all—not for those who value wilderness, wildlife, solitude, and unspoiled scenery. Rather, it is an enormous development and exploitation program, which, if implemented, would result in the destruction of most places in our national forests that are not already protected in some way.

The document compares three alternatives for forest management and development—low, medium, and high—each with its own level of funding. The plain sales pitch is: "Give us more money, and we'll make sure that everyone gets more goodies." Everyone, that is, except those who love wilderness. The thrust of the document is to play down the importance of wilderness. It speaks scornfully of "preservationists" and makes it very plain that there will be no more wilderness in the national forests beyond what is now formally recognized as such.

Right now, the national forests contain

14 million acres of officially designated wilderness. Another 56 million acres—called "de facto" wilderness—are roadless areas presently unprotected by official wilderness designation. In 1972, the Forest Service quickly reviewed these areas, and in 1973, set aside 12 of the total 56 million acres as "wilderness study areas." But the "environmental program" promises to study only 1.7 million acres under the "moderate" development alternative and 2.4 million under the "high" alternative. Nowhere does the document say anything about the missing 44 million acres of *de facto* wilderness, which contain some of the most beautiful and important lands in the national forests.

The document provides a clue to the proposed fate of these lands in the portion devoted to the timber program. All three alternatives say the same thing: "Continue the availability for timber production [on] all of the lands now available for that purpose. . . ." In other words, any lands having commercial quality timber will be logged un-

less they have *already* been set aside, which means all the 44 million acres will go. If this program goes through, there will be no further wilderness studies.

The "environmental program" talks about "access" (logging roads) and "vegetative change" (logging and clear cutting). The "low" alternative would in the first period (1975-1979) increase "access" by 37,000 miles and "vegetative change" by 12 million acres. The "high" alternative, during the same period, would increase "access" by 55,000 miles and "vegetative change" by 19 million acres. Indeed, if the "high" alternative were adopted, *all* commercial timber in the national forests would be cut down in 47 years. This is what the forest service calls its "Environmental Program for the Future."

Mike Frome lost his job for criticizing this program. We should all let CBS know what we think about its action. Threats to jobs are nothing new, of course, for those who dare to take on the timber industry and its powerful friends. People in Alaska have lost their jobs, people in Montana have been threatened into silence, and people in Oregon have been beat up—all for daring to speak out against the timber industry's voracious designs on the national forests. But it is hard to believe that a nationally respected outdoors magazine would do likewise. Frome's fate gives us a taste of the sort of pressures we may have to face, of the sort of tactics we can expect, in our fights to save the wilderness.

NEWS VIEW

No better idea from this Ford

I HAVE BAD NEWS," President Ford told the nation in his State of the Union Message, "I don't expect any applause." Certainly for conservationists those two remarks describe the President's message aptly. The worst part of the bad news is that most of the environmentally damaging elements in the President's economic and energy programs are not even original. They are warmed over scraps from the Nixon Administration served on the new platters of stagflation.

Take, for example, the President's call for a five-year moratorium on auto-emission standards at the levels of the interim 1975 California standards. In 1972, when the President's Office of Science and Technology reported on the costs and benefits of relaxing auto-emission standards, this proposal was seen principally as a means of keeping the cost of automotive transportation low, in order not to jeopardize the traditional American reliance on the private car. Then, in the winter of 1973, during the Arab oil embargo, Chrysler proposed a moratorium at the levels of the 1974 standards as a means of saving enormous quantities of fuel. But

when the 1975 models were actually introduced, it became clear that they showed substantial improvements in fuel economy over the 1974 models. So, the next time the idea popped up in the fall of 1974, it was an anti-inflationary device. Now, in early 1975, it is anti-recessionary. Officially, the White House now is advocating this proposal as part of a deal with Detroit, wherein the auto industry "promises" to achieve fuel economy gains of 40 percent by 1980. Studies done for the Environmental Protection Agency and the Council on Environmental Quality have demonstrated conclusively that Detroit can achieve the 40 percent fuel-economy gain while still meeting the anti-pollution standards. Spokesmen for the auto industry admit this is feasible, but say it would require phasing out the largest and heaviest models, thus giving Americans only a choice among smaller, lighter vehicles. Is this an adequate justification for cutting emission standards? Worse, given the fact that Detroit has failed to comply with mandatory anti-pollution requirements written into statutes, what reason is there to be sure

that the industry will comply with the voluntary 40 percent reduction?

The President's proposals to postpone emissions requirements on power plants to enable a more rapid conversion of oil-burning facilities to coal is also old fare. During the Arab oil embargo last year, the major debate on environmental provisions of the Emergency Energy Act was over the "coal conversion" issue. The Congress at that time granted the Federal Energy Administration (FEA) the necessary authority to order such conversions, but provided careful safeguards to ensure that the public health was not seriously endangered. Evidently the FEA has been upset by the discovery that these safeguards interfere with its program of immediately converting to coal such facilities as the Ravenswood Power Plant in the heart of New York City, or Arthur Kill on Staten Island. Last winter, the argument was that because of the embargo oil might actually be unavailable; now it is clear that instead the problem is the outflow of foreign reserves to oil exporting nations. This is a problem, but the relatively minor effect of these coal conversions will not solve it. It will, however, result in the deaths from pollution of hundreds of individuals in the affected areas if the latest health studies are even approximately accurate.

There is considerable question as to whether or not the coal is available in the short term; in any longer time frame, stack

gas scrubbing equipment can be installed to eliminate most of the environmental problems associated with coal burning in most of these plants.

The President's plans for finding non-fossil alternatives for power add up to more nuclear power plants, in fact 200 of them. Evidently even the President's energy advisors are concerned that these plants, given their record of breakdowns, cost-overruns and unreliability, may not appeal as investments to public utilities. He proposes to sweeten the pot for the utilities by increasing their investment tax credit by from 4 to 12 percent for the next three years "to specifically speed the construction of power plants that do not use natural gas or oil."

The plans also involve an enormous national commitment to so-called "synthetic fuels," liquid or gaseous fuels extracted from oil-shale or coal. The President anticipates the building of 20 synthetic fuel plants, in spite of the fact that the focus of such proposals to date has been overwhelmingly on oil shale or coal strip mined in the arid Rocky Mountain region where there is clearly not enough water for these plants, other present uses, and land reclamation.

Administration energy advisors are clearly aware that the economics of these plants is highly dubious, that, in fact, the major private developer of oil-shale technology just pulled out. To evade the unfortunate realities of primitive technologies, which are both environmentally unsound and economically uncompetitive, the Administration announced an excise tax on domestic crude oil and all oil imports of \$3 a barrel. Ford made it clear that the tariff would be raised, if necessary, to keep the price of oil from falling in the U.S. in the event the international market price should fall to a level which would make imports cheaper than synthetics. This "floor price" under petroleum is a major reversal of past Administration efforts to break the power of the oil cartel and reduce the world price. At the meetings in Vail, Colorado, in December, even Treasury Secretary William Simon denounced the proposal as a giveaway to the oil companies. But the Interior Department's infatuation with the conversion of America's mountain west into a new Appalachia has evidently prevailed. The President proposed no measures to encourage the following: short-range implementation of solar space heating, alteration in federal leasing policies to encourage more rapid production from already leased oil and coal areas, elimination of large cars, air conditioning, power accessories and other design features that substantially increase the fuel consumed by automobiles, alterations in electrical energy pricing policies that encourage excessive use, elimination of artificial subsidies to energy producers and consumers, or anti-trust attacks on increasing control of all energy sources by the oil industry.

He did call, in general terms, for some

kinds of anti-trust action and some modification of government regulatory policies that encouraged inflation, but made no specific commitments on such examples as the Interstate Commerce Commission's outrageous regulation of interstate trucking, which encourages the shipping of empty trucks from one city to another in search of a cargo permitted the trucking line under the Commission's enormously complex regulations.

Only on energy savings from insulation did the Ford message incorporate new ideas on the energy conservation front, a step forward, but mainly by contrast with the rest of the message.

Ideas seem to have made it into the State of the Union Message not on the basis of efficacy, nor because the many recent studies done on energy showed they would be effective. The classical conservative faith in the market mechanism appears only scantily. Considerations of long-range resource conservation, environmental protection, and the public health appear only in the footnotes.

The major criterion for appearance? From all the evidence, previous inclusion in at least one of the Nixon Administration's various energy and environmental proposals.

Yosemite Master Plan succumbs to protests

Conservationists won a major victory when the National Park Service recently rejected its own master plan for Yosemite National Park. Conservationists opposed the plan because it reflected the desire of the Music Corporation of America, the Yosemite concessionaire, to undertake major development activities incompatible with the park's natural character. The Interior Department acted on the basis of deficiencies in the Environmental Impact Statement on the plan, and because the plan had been formulated without adequate public participation.

Opponents of MCA's plan for major new facilities objected that the concessionaire

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was too heavily involved in formulating the proposals, while the interested public had been essentially excluded. The decision to reject the master plan means that MCA suggestions will be treated in the same fashion as those of other segments of the public. It seems unlikely that the new plan will be biased toward the MCA's development proposals, since Howard Chapman, Western regional director, has told the corporation that the Park Service "should err on the side of preservation—if necessary—because if the resource is destroyed there is nothing left."

In 1971, a draft master plan for the Yosemite Valley called for removing nonessential facilities from central areas and an eventual ban on all auto traffic. The Park Service has since backed off from these proposals, although it did implement a modified auto ban. Conservationists feared that acceptance of MCA's proposals would foreclose indefinitely the chances to eliminate the present concentration of facilities in Yosemite Valley.

Ultimate development and implementation of a new master plan will be the responsibility of Gary Everhart, the new director of the National Parks Service. Everhart, formerly the superintendent of Grand Teton National Park, will replace Ron Walker, who has been under heavy fire from conservationists for his role in the Yosemite question, among others.

The department has already announced that a series of public workshops will be held to obtain the views of interested citizens, and that a moratorium has been placed on new construction and upgrading of present facilities. Comments on the issue can be sent directly to Yosemite Supervisor Leslie Arnerberger, Yosemite National Park, California 95389.

Oil industry foresees its winter of discontent

The December 30 issue of the *Oil and Gas Journal* sums up the oil industry's assessment of the next Congress in its headline: "Odds never greater in U.S. for punishing legislation." The analysis, by the *Journal's* Washington editor, Gene Kinney, points out that "the industry has incurred the outright hardcore opposition of at least one-third of the House and the Senate. This group also happens to control some of the key committees which will shape legislation. And where committee chairmen are more favorably disposed toward development incentives, they will find themselves with less power than before adoption of rules changes. . . ."

Many of the legislative proposals of concern to the industry relate to its tax treatment, and here Kinney predicts that the oil-depletion allowance will be ended for all but small producers. He also foresees an end to the industry's overseas tax foreign credits,

EDITORIAL

Preservation and Re-creation

WHAT VALUES MOTIVATE the Sierra Club member to join, to renew, to participate? We assume that each new Sierran subscribes to the purposes of the club, both those implicit in its activities and those expressed in its bylaws. A renewal is a vote of confidence, an evidence that the club's goals and programs are personally important, a symbol of an important kind of involvement. The decision to participate actively speaks to the opportunity for realizing personal goals and for producing personally significant social change. Each year, our 147,000 members re-create the Sierra Club; they re-establish and modify the club's image through their commitment to values they find reflected in the Sierra Club's program.

The receipt recently of a sociological study of the Sierra Club and organizational commitment, done by Arthur St. George, University of California, Davis, gives us all a new analytical look at the values held by Sierra Club members. The St. George study corroborates some of the common views about Sierra Club members, but it effectively negates some of the popular stereotypes as well.

The Sierra Club is plainly a preservationist organization. It insists that land-use decisions be based on more than economic considerations and that wilderness is inherently valuable, regardless of use. It calls for humans to restrain their influence over the earth and to restrict it almost entirely in some places. Historic and contemporary Sierra Club programs attest to a philosophy of land preservation. As expected, the St. George study suggests that member value systems do indeed support and reinforce preservationist environmental beliefs. Almost two-thirds of the members surveyed agreed with the scale items for this belief system, endorsing such questionnaire items as "Just knowing that some primitive natural areas exist makes me feel better," and "Primitive wilderness areas that no one visits are just as important as popular and scientifically attractive areas."

Also expected was the evidence of low member acceptance of that conservation ideal which emphasizes environmental manipulation, multiple use, and economic determination of value. Only five percent of the members involved endorsed wholeheartedly the belief system that would expand visitor facilities in national parks, open back country to motorized traffic, and extend mining and logging into primitive areas.

There was relatively little evidence that club members supported a belief system that values untrammeled lands solely as an escape from a technological society and an unhappy urban civilization. Criticism of the Sierra Club as impractical, anti-civilization escapists is simply not supported; rather St. George interprets Sierra Club members as "not running from civilization as much as running to wilderness," as evincing a positive rather than a negative stance toward the earth's environments.

The study revealed that a surprisingly small portion of the membership surveyed rated recreational responses to the environment as most important to them. An original purpose of the club—and source of the stereotype of the Sierra Club as rugged outdoorsmen who wish to protect their own playground—the recreational-value syndrome was rated as the highest environmental value by only one-fourth of the contemporary Sierrans. Indeed there is some suggestion that the outdoor experience sought by Sierra Club members may be more for purposes of re-creation than recreation.

That point is demonstrated in the most intriguing and surprising finding of the study that many members hold as very important a spiritual-aesthetic belief system about the environment. In these days when formal religious experience is less widespread, in an organization one-third of whose members have no formal religious affiliation, 60 percent of those questioned seemed strongly motivated by such beliefs as: "Nature is far more beautiful than any manmade work of art," and "Being in the wilderness gives me a strong sense of communication with God." The importance of natural areas as sources of beauty and spiritual experience has not been anticipated by students of modern environmental organizations. Instead, they had predicated a more sophisticated, more "practical" kind of orientation, one which rejected nineteenth century romanticism.

This dominance of a spiritual value system toward the natural places of the earth, coupled with the strong preservationist trend among members, has real organizational significance for the Sierra Club. It can explain the vigor and quality of member activity on behalf of environmental protection, activity that frequently takes on the sense of mission. It directs in important ways that club programs be oriented to expression and support of spiritual-aesthetic beliefs. And it demonstrates an historical continuity in the Sierra Club with founder John Muir, whose observation, "In God's wildness lies the hope of the world," calls out clearly over the years to this generation of environmentalists.

Kent Gill

SIERRA CLUB PRESIDENT

either through administrative or legislative action. The article says that Congress "is dead set against" allowing oil and gas prices to be fixed at or near present levels as an incentive to the development of synthetic fuels from coal and oil shale. This proposal, strongly opposed by Secretary of the Treasury William Simon, and dropped from the Administration energy package, is seen by conservationists as a means of stampeding the nation into massive commitments to environmentally unsound and economically infeasible techniques for exploiting strip-mined western coal, and oil shale.

Kinney is cautious about the prospects for a federal-facilities-siting bill, expected by conservation groups to form the centerpiece of a major Ford Administration campaign to reverse the election results in states like California and Colorado, which elected state governments hostile to massive new energy facilities development.

He cites the defeat of the land-use bill in the last session as pointing to a "rocky road for new legislation."

On the plus side for the oil industry, he sees further weakening of the Clean Air Act standards and deadlines as probable.

Particularly significant, to the *Oil and Gas Journal*, is the fact that Louisiana Senator Russell Long, Chairman of the Senate Finance Committee, "for years a defender of domestic incentives for oil and gas compa-

nies, large and small, went to great lengths to denounce Exxon" for its role in opposing Long's cargo-preference bill in the closing days of the last session. Kinney's article sees an "ugly," "poisonous" atmosphere in the new Congress as a result of resistance to high levels of oil-company profits.

Conservationists in Washington expect pretty much the same results, though they are not nearly so certain that the Clean Air Act cannot be saved. What is interesting is that, for a change, the industry itself is getting the same type of interpretation from its own sources. The question for the next session is whether this behemoth, for the first time under serious political challenge, can rise above the bitterness evident in Kinney's article and recognize that its accustomed way of doing business can no longer muster the political support it has grown used to. It is significant, for example, that the industry now recognizes that the chaotic state of most land-use controls is not in its interest. But it still must decide whether to provoke a confrontation with governors, mayors, conservationists, and ordinary citizens with a federal preemption bill, or to begin to throw its still considerable weight behind state efforts aimed at meeting the legitimate needs for energy facilities in environmentally acceptable fashion.

Strip-mine reclamation still "experimental"

The Ford Administration's determination to slip out of the nation's energy problems through massive energy development in the northern plains flies in the teeth of mounting evidence that the present plans are ill-conceived and poorly thought out. Sierra Club Research Director Robert Curry, in a paper delivered at a conference on "Land Reclamation in Western North America" sponsored by the Department of Interior and the University of North Dakota, concluded that current reclamation patterns used in the plains are "not those that necessarily lead to self-sustaining progressive vegetational succession." Curry said that all present efforts in the reclamation field should be considered "experimental." He argued that new plans for mining in the region should include substantially better data on the biology, geology, and soil chemistry of the affected area so that the reclamation effort could include a "definable risk of success and failure." Such an ability to define the risk is clearly essential to any attempt to analyze the costs and benefits of strip mining on the plains. But Curry's paper shows that present plans do not begin to include the necessary data, and that critical research remains to be done.

The club's research director argued that there are two conceptions of "reclamation." (He indicated that there is general agreement that real "restoration" of the land to its previous condition is impossible.") One defini-

tion assumes that reclamation has occurred even if the plant succession established is dependent upon the continuous intervention of man "to counteract natural forces." But Curry points out that in the long run, such reclamation is very dubious since under the law it will be impossible or virtually impossible to hold the mining operator or his heirs "legally responsible for reclamation for the minimum necessary period of 100 years."

Curry suggested that the second type of "reclamation," while "less useful for promotional public relations brochures," would guarantee a progressive development of soil and plant communities back toward the original conditions without continuous human intervention. He said that "probabilities for success are considerably different than those for conditional reclamation." Such steps commonly used in reclamation as stockpiling soil, fertilization, and irrigation are not necessarily helpful for this type of reclamation. Nor, he argues, is precipitation necessarily the key index of whether reclamation can succeed. Current experiments, he concluded, have gone in the other direction, making actual success a matter of luck.

In Washington, meanwhile, the U.S. Court of Appeals enjoined the Department of Interior from proceeding with four major strip-mine projects in Wyoming until it could decide whether or not to require the preparation of an environmental impact



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statement for the entire Northern Great Plains of energy development. The preparation of such a statement, demanded in a suit brought by the Sierra Club, the National Wildlife Federation, the Northern Great Plains Resources Council, and others, with legal assistance from the Sierra Club Legal Defense Fund, had been rejected by a district court.

President's message on the Wilderness System

On December 4, 1974, President Ford transmitted to Congress the Tenth Annual Report on the status of the National Wilderness Preservation System, as well as recommendations for 37 new additions to that system. Although Ford's proposals include over 9 million acres of potential wilderness, this figure is still 2.5 million acres short of that recommended by conservationists. The biggest losses are the Salmon River and Idaho Wilderness in Idaho (where the President recommended over a million acres less than conservationists) and the Sheldon Wilderness in Nevada (over half a million acres less). However, it has been the tendency in the past for Congress to enlarge upon the President's proposals. Conservationists hope that grassroots pressure will inspire Congress to act quickly and generously with the proposals now before them, many of which

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have been pending for some time.

The 37 new proposals complete the initial ten-year executive review prescribed by the Wilderness Act. When the act was passed in 1964, conservationists envisioned the inclusion of between 35 and 45 million acres in the system. We have not approached that goal, although there are many proposals currently before Congress that have yet to be acted upon, and additional surveys will be undertaken in the future on a case-by-case basis. It is also important to note that we had not originally anticipated the gains we have achieved in setting aside primitive areas and wildlife refuges. Although the act is working, we have only completed the initial phase. Between 40 and 60 million acres of Western Roadless Area need to be considered, and most of the magnificent wilderness areas in Alaska have yet to be studied.

Brown appoints Claire Dedrick as California Resource Chief

Sierra Club Vice President Claire Dedrick has been appointed California's Secretary of Resources by newly elected Governor Edmund G. Brown, Jr. Mrs. Dedrick, an outstanding leader in the club and the conservation movement in general, will have more than a dozen departments under her control, including State Parks, Water Resources, and Fish and Game.

A microbiologist by profession, Dr. Dedrick has received the National Wildlife Federation's Distinguished Achievement Award and many other honors in the conservation field. She has been a club director since 1971 and is the current chairman of the *Bulletin* Committee.

Mrs. Dedrick's Deputy Secretary of Resources is the club's former Associate Conservation Director, Larry E. Moss. Both Dedrick and Moss have long experience in the tough political fighting it has taken to gain such environmental victories as the landmark coastal zone legislation.

Aphids may rush in where tussock moths now fear to tread

The Forest Service's decision last summer to spray 425,000 acres of forest in the Pacific Northwest with DDT to control an outbreak of the tussock moth, pushed by the service past a reluctant EPA Administrator Russell Train, is turning out to have been as dubious an endeavor as conservationists warned at the time. Train's approval, which overrode an earlier ban on DDT by his predecessor William Ruckelshaus, overlooked clear evidence from entomologists that the tussock moth is indigenous to a given forest area, and that its outbreaks are rapidly put down by the moth's own enemies.



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Selway River Outing



Educational outings offer Sierra Club members a chance to learn more about the workings of their natural environment under the tutelage of an experienced instructor. The Selway River Natural History and Ecology trip, with a modified knapsack format and optional college credit available to participants, is one of nine educational trips being offered this year. Trip leader Oz Hawksley, an ecologist and naturalist, has been Professor of Zoology at Central Missouri State University since 1947.

The Selway River, one of the most beautiful wilderness white-water streams in the nation, flows through parts of the Bitterroot and Nez Perce National Forests, just west of the Idaho-Montana line. The 1975 Selway River educational trip has been specifically designed to provide a two-week (more for your money) trip that will have a minimum impact on the area and plenty of time for natural history and ecological studies. The teaching and other group equipment will be rafted down the river while the participants backpack their personal items down an easy 50-mile river trail.

The leader-instructor led the first group (1960) to run the Selway by canoe. This stimulated interest in it as a wild river and prime white-water stream. But even though he is a boater, he points out that one cannot know a wilderness river by just boating it. The boater makes a hurried trip, his shore time spent in scouting rapids and resting in camp from exhausting days. To know a river, one must walk it, leisurely, and become familiar with the ecosystems which make up its banks and its drainage. That we will do on the 1975 Selway trip, though aquatic ecology and varied water fun will also be included.

The Forest Service is making a sincere effort to see that the Selway provides a high quality wilderness experience. Therefore, boating parties, which are the principal users, are limited to one party launching per day. Even our single raft counts as a launch. Hopefully, this management plan will preserve the clear, sparkling waters, the lush, cedar-lined banks, and unspoiled campsites of this gem in our Wild and Scenic Rivers System. Come join us to learn what makes a wilderness river!

Now, Sierra Club Forester Gordon Robinson raises the possibility that as a result of this spraying, an aphid epidemic in the area is a real possibility. The balsam wooly aphid, an introduced pest, is probably the most serious enemy of true firs in the Northwest. In 1957, the Forest Service estimated that 750 million board feet of silver fir and 1.25 billion board feet of intermingled species would have to be cut over a 10-year period because of outbreaks of this insect on

the Gifford Pinchot National Forest alone.

Indications are that the predators of aphids are much more susceptible to DDT than the aphids themselves, and that the aphids build up resistance to DDT much faster than predators. Under forest conditions, no real controls of this insect other than its natural predators are possible. Serious outbreaks of other aphid species have been reported after DDT spraying by entomologists. Robinson

Continued on page 35

REGIONAL REPS REPORT

Southwest: "Grand Canyon National Park Diminution Act"

ON JANUARY 4, PRESIDENT FORD signed into law the Grand Canyon National Park Enlargement Act. Earlier, the *New York Times*, in an editorial, had referred to the same piece of legislation as the "Grand Canyon National Park Diminution Act." What does the bill do, and what do we have to look forward to concerning the protection of the Grand Canyon?

The most controversial section (section ten) of the act transfers 185,000 acres of national park and national forest lands to the Havasupai Indian tribe. These lands include all of the Havasu Canyon drainage above Beaver Falls, portions of Beaver and Little Coyote Canyons, plus sizeable acreages of plateau close to the rim. Included in the transferred lands are the well-known and stunningly beautiful Havasu and Mooney Falls.

The language transferring these lands to the tribe does contain a number of restrictions on their use. In general, the intent of Congress in legislating these restrictions was to protect these former park lands from uses which would be "inconsistent with, or detract from, park uses and values." Most of the concern centers around the type of tourist development that might take place now that the lands are no longer in public ownership. The tribe specifically is permitted to develop "small business enterprises," including tourist developments. Any such development must be in accordance with a plan to be developed by the Secretary of the Interior.

The major problem will be enforcement of the restrictions and how to ensure that the plan does indeed protect park values. Although the act does call for public hearings on any development plan, the degree to which public comments will carry weight is certainly in question since the lands are no longer in public ownership.

Another provision of section ten allows the Havasupai tribe to use 95,300 acres of land still within the park for "grazing and

other traditional uses." These lands are basically those located between the enlarged Havasupai Indian Reservation and the Colorado River. In a last-minute revision of the legislation, the conference committee added language allowing non-members of the tribe to hunt on lands that were formerly within Grand Canyon National Park and Monument. This is of particular concern because the lands in question are important lambing grounds for bighorn sheep.

Thus the Grand Canyon National Park Enlargement Act's most hotly debated and well-known section actually removed 91,000 acres of land from park protection. What did we get in return? The answer, unfortunately, is very little. Although the bill nearly doubles the size of the park (from 673,000 acres to 1.2 million), most of the added area was already in the national park system under different names: Grand Canyon National Monument, Marble Canyon National Monument, Lake Mead National Recreation Area, and Glen Canyon National Recreation Area. The conference committee refused to include some 222,000 acres of additions that were in the House version but not in the Senate's. These lands—upper Kanab Canyon and its tributaries, Whitmore, Parashont, and Andrus canyons, plus the southern fingers of the Shivwits Plateau—were not included because of the objections of Representative Sam Steiger, Senator Paul Fannin, mining interests, ranchers, and hunters. The most serious threat to these lands is mining. Both Phelps-Dodge and Exxon are now exploring for uranium there.

Only about 50,000 acres of the enlarged park came from outside the national park system, and these lands were already in federal ownership. When that meager addition is compared with the loss to the Havasupai, one then realizes why the *New York Times* referred to the legislation as the "Grand Canyon National Park Diminution Act."

There are some positive benefits in the act, and they should not be overlooked. It does

consolidate the management of much of the Grand Canyon under a single agency and in a single administrative unit. The enlarged park includes all of the Colorado River within the Grand Canyon from the mouth of the Paria River to the Grand Wash Cliffs. Although the legal status of the proposed Hualapai Dam (in the lower portion of the Grand Canyon) is unchanged, the mere inclusion of the reservoir site in the park places a substantial public-relations barrier in the way of those who are still promoting the dam. As is the case with all parks, Congress would still have to take affirmative action in the future to allow any dam. For the present, the House Interior Committee report states that the "committee again concluded that this segment of the river should not be destroyed by inundation, and that the entire river should be preserved for all people for all times with nothing to mar its grandeur."

Two other provisions contained in the act are also of interest. The first requires a wil-

derness study of the enlarged park to be completed within two years. The second allows the Secretary of the Interior to make recommendations to other federal agencies whose responsibilities concern aircraft safety and noise, for rules and regulations that would "protect the public health, welfare, and safety of the natural environment within the park." It is not clear that this provision will actually result in any reduction of aircraft noise and activity in the Grand Canyon, but it is at least a first step in that direction. In sum, the final act signed by the President is a deep disappointment to the many persons throughout the country who worked hard on the legislation. Nevertheless, the bill is now law and we have to live with it. The major loss was the transfer of lands to the Havasupai. The remaining portions of the bill contain small, but significant steps forward, and we must use these opportunities to provide the best protection we can for the Grand Canyon.

John McComb

Southern California: Ten Million Acres of Oil for Sale

THE DEPARTMENT OF THE INTERIOR'S credibility has plummeted to an all-time low in Southern California as plans and schemes have been revealed to lease offshore areas for oil development. As early as July, the Sierra Club charged that the Nixon Administration was making a mockery of the processes of environmental assessment and public hearings in its rush to commence offshore drilling in Southern California. This commitment was made in the face of overwhelming local and state opposition—prior to development of a national energy policy; prior to the initiation of a conservation program; prior to completion of coastal planning; prior to an assessment of environmental, economic, and social costs; prior to gathering of baseline data; and prior to full public hearings.

In answer to those charges, however, Under-secretary of the Interior Jared Carter, in a meeting in Santa Monica, denied that any decision has been made. But subsequently, a full investigation by Philip Fradkin, environmental writer for the *Los Angeles Times*, made headlines on November 10 with this story: "Despite official claims to the contrary, the decision has already been made to sell leases for offshore development along the Southern California coastline.

"This is the only conclusion that can be drawn from scores of letters, memos and documents available to the *Times* that reflect the thinking of the federal government over the last 20 months."

Despite Carter's previous public denial, one document bearing his signature called for a "firm leasing schedule" that definitely

includes "10 million acres leased in 1975—not just 10 million acres offered."

The evidence clearly revealed that the plan to lease was nurtured privately between the oil industry and the federal government for three years before public announcement.

But that wasn't all. Most disgusting was the revelation that the Los Angeles Bureau of Land Management office, which has been set up to manage the leasing program, was more intent on influencing public opinion than gathering data necessary for environmental assessment. "The top priority listed in a memo outlining a proposed \$1.2 million 'environmental' research study—the only major research to be conducted by the government for this lease—contains a \$50,000 item for reaction analysis and identification of local political community power structure." An additional \$43,000 was earmarked for determining public opinion and "softening" any that was negative.

In a memo to his superior in Washington, D. C., William Grant, head of the Los Angeles BLM office, wrote: "The identification of the composition of the community power structure will assist in education thrusts toward these officials at a later time, with possible softening of their present opposition to offshore development."

Grant's memo, plus one from the U.S. Geological Survey, also confirmed that sufficient geologic and environmental data were lacking for the lease area.

Before the week was out, another story broke, reporting that the Department of the Interior was planning to blanket most of the waters off the Southern California coast

with not one but a series of four sales. Furthermore, plans were already being devised to lease an area on the central coast from Point Conception to Half Moon Bay, impinging on the scenic coast of Big Sur and Monterey Bay. A third sale area would take in the area from Eureka to the Oregon border, offshore of Redwood National Park. And a final area would cover nearly the length of the Washington coast.

Public outrage, fired by this news, was rekindled by Mayor Tom Bradley's subsequent charge that the oil industry was "shutting-in" existing wells, primarily in the Gulf of Mexico, to hold back production.

Meanwhile, the environmental impact report on the Southern California lease sale has yet to materialize, though it was originally promised for this past fall. What did arrive in October was the draft environmental statement on the complete 10-million-acre program for 1975. Its 2,000 pages, however, were weightier than its words; those pages, reread several times, revealed the haste with which it was put together.

In short, it is an inadequate statement, evidence of the fact that none of the stated goals of the program will be met: 1) The development is not orderly and timely but premature and reckless, preceding as it does a comprehensive national energy policy, the implementation of a meaningful conservation program, and the completion of coastal planning as mandated in California by Proposition 20. In addition, the industry will lack capital, equipment, and trained personnel to respond to such an enormous sale. 2) The environment cannot be protected if baseline data has yet to be gathered, seismic hazards are not understood, and oil spill recovery has not improved. 3) There is serious doubt that a fair market value can be assured by putting 17 million acres on the auction block to guarantee that at least 10 million will be leased.

While there is no question that there will be spills, the draft environmental impact statement makes no attempt to assess their likely impact: "This inability to quantify the effects of large oil spills makes the prediction of impacts resulting from the ten-million-acre proposal an extremely difficult task that can be done only in qualitative terms in most cases."

Postponed under threat of a lawsuit by the City of Los Angeles, hearings are being held this month in Los Angeles, as well as in Trenton and Anchorage, on the draft environmental impact statement. Whether hearings will be futile rituals without substance remains to be seen as we wait for answers to these questions: Can the public and the state and local governments change or modify the Administrations' commitment to a massive and speedy leasing program? Can California, as the test area, safeguard its golden coast against a tidal wave of black gold?

Mary Ann Erickson

Harold C. Bradley

New Honorary President of the Sierra Club

OUR FIFTH HONORARY President, Harold C. Bradley, links today's Sierra Club closely with its beginnings. His father Cornelius was one of that small band of conservationists in the San Francisco Bay Area who founded the Sierra Club and signed its articles of incorporation in 1892. Cornelius was a director and a member of the publications committee. John Muir was a family friend who often visited the Bradley home.

When Harold was about eight years old, he began to hike the Marin and Berkeley hills with his father. He took his first trip to Yosemite in 1892, the year the Sierra Club was founded. As an undergraduate at the University of California from 1896-1900, he took high school boys to the Sierra Nevada for summer camping trips, and during graduate school at Yale, he brought eastern boys the thrill of exploring the Sierra Nevada.

In his productive professional years at the University of Wisconsin Medical School from 1906 to 1948, Harold was professor of physiological chemistry. The University recognized his preeminence with its second faculty Emeritus Award. It is a part of his life of which I know little, except that even from this distance he participated in the long, unsuccessful campaign (from 1906 to 1913) to save the Hetch Hetchy Canyon from being dammed to furnish water for the city of San Francisco.

Harold was a cross-country skier—to the age of 85. In 1924 he duplicated the famed Snowshoe Thompson's trip across the Sierra in the winter—alone—and in 1947, he was still at it. On February 15th of that year, Harold and three of his sons set out on skis, up the eastern escarpment of the Sierra Nevada from Lee Vining to Tuolumne Meadows, where they stayed off and on for six weeks at the McCauley Cabin at Soda Springs. It was the first time the snowbound cabin had been used for a winter haven, and it became a welcome home base after days spent exploring "this miracle of winter." For part of their winter in the Sierra, Harold and sons Ric,

Bill, and Steve were joined by another son, Dave, on military leave, and daughter-in-law Elizabeth.

A measure of Harold Bradley, the outdoor man, is expressed in his article about that trip in the 1947 *Sierra*



Larry Dawson

Club Bulletin. He is a rugged, but not a reckless man: "the trip was without an accident of any sort. . . . Each of us skied within the limits of his own ability and control." He knows and loves the mountains in every season, and notes with surprise "the ease of winter travel on skis compared with foot travel in summer over the same terrain. . . . The sense of absolute wilderness was of course a strong impression throughout this whole area. The snow was spotless, and usually trackless. There were no jarring sounds or sights to remind us that man had already begun his reduction of this lovely region to just another automobile route through the mountains."

He continues: "The most vivid impression, and the one which will linger longest in our memories, is that of the superlative beauty of this winter mountain scene, whatever its mood might happen to be. Up along the crest were the stimulating views of lofty summits gleaming white against the crystal blue of the sky. There were the days when the wind roared and the snow powder swirled

in the potent turbulence of the storm. Down in the Meadows there was almost unbroken calm."

Fitting recognition came to Harold for his efforts in promoting skiing among young people when he was made a member of the National Ski Hall of Fame.

He was one of the donors who helped buy the Soda Springs property at Tuolumne Meadows for the Sierra Club, property only recently transferred to the National Park Service. He has also given to the club a hut to be used as a refuge for cross-country skiers in the mountains west of Lake Tahoe, and for this generosity has been made a patron member.

When I first met Harold Bradley, he had recently returned to live in the family home at 2639 Durant Ave., Berkeley. He had become a member of the Club's Conservation Committee (then the *only* conservation committee). The Bradley home, being both spacious and hospitable, was a favorite haunt of the Conservation Committee. There, many ideas were thought up and developed, ideas which transformed the character and focus of the club. Harold himself first conceived of the clean-up campaigns which later led to the service trips of the club. He was extremely active in the campaign to keep the dams of the Upper Colorado River Project out of Dinosaur National Monument. Perhaps more than any other single campaign, this one changed the character of the Sierra Club from the outdoor California oriented group it was in its earlier days to the national conservation institution which it has grown to be today.

Harold became a member of the board of directors of the Sierra Club in 1951 and served for ten years. He was the president of the club from 1957 to 1959. He filled this office with great distinction. He presided at board meetings with dignity and kindness, giving each speaker opportunity to present fully his viewpoint. When he retired from the board, he was forthwith elected an honorary vice-president, an honor which he

held from 1961 until his election as honorary president in December 1974. In May, 1966, he was given the John Muir Award, the highest tribute the club can extend to anyone.

Harold Bradley's first happy marriage to Josephine Crane lasted over 40 years until her death. Seven sons and one daughter were born to Josephine and Harold. His second marriage was a Sierra Club romance. At a board of directors meeting in Los Angeles, he met the chairwoman of the Angeles Chapter, Ruth Aiken. Al-

though directors' meetings cannot ordinarily be termed romantic, this one led to a second happy marriage in 1957. Ruth says, "When I think or talk about Harold, my enthusiasm knows no bounds."

And the writer agrees. Harold Bradley is a man of many qualities: scientist, teacher, scholar, conservationist, and a gentleman in the full sense of the word. He brings honor to the Sierra Club itself as he assumes his role as our new honorary president.

Dr. Edgar Wayburn

Francis Farquhar Personification of a Tradition



Francis and Mary Farquhar as seen by Cedric Wright during a relaxed moment on a Sierra Club outing of the 1930's.

FRANCIS P. FARQUHAR, the Honorary President of the Sierra Club, died at his home in Berkeley, California on November 21, 1974. Conservationist, mountaineer, scholar and writer, he ranks with John Muir and William Colby in his influence upon the club and the conservation movement. Born on December 31, 1887 in Newton, Massachusetts, graduated from Harvard University in 1901, he came west and discovered Yosemite, the High Sierra, and the Sierra Club.

He was transformed by his exposure to John Muir's Range of Light, and from that moment forward he became a disciple of the Sierra Nevada through his mountaineering, the chronicling of its history, his efforts to preserve it, and his service to the Sierra Club. He

served as a director for 27 years, from 1924 to 1951, as vice president and fifth officer, as treasurer, and twice as president from 1933-35 and 1948-49.

Francis was editor of the *Sierra Club Bulletin* from 1926 to 1945, and brought to his work a vast knowledge of the Sierra Nevada, a dedication to the English language, and a love of typographical excellence that made the *Bulletin*, in the words of a British authority "that model of all mountaineering periodicals."

His writings were prodigious. Besides numerous articles in various magazines and journals, he wrote *Place Names of the High Sierra* in 1926, edited a new edition of Clarence King's *Mountaineering in the Sierra Nevada*, and through his editing of the letters of William H. Brewer, a com-

panion of Clarence King in the California Geological Survey, produced *Up and Down California in 1860-64*, one of the classics of California literature. His efforts as an historian culminated in his definitive *History of the Sierra Nevada*.

He hiked the length and breadth of the Sierra from Fredonia Pass to Mt. Langley and climbed every 14,000 foot mountain on the West Coast, including the first ascent of Middle Pali-sade in 1921, the last 14,000 foot peak in California to be climbed. He was responsible, through the person of Robert L. M. Underhill, for introducing the techniques of modern roped climbing to the Sierra, thereby starting the development of a climbing technique that is used throughout the world today. In 1934, he married Marjory Bridge, an outstanding climber, and for 40 years their home was the center of club mountaineering as climbers of all ages constantly gathered to be reconfirmed in the faith.

A pioneer conservationist, he was instrumental in the club's efforts to get the entire Kern River country added to Sequoia National Park in 1926. In 1965, the club awarded him its John Muir Award for conservation.

Francis was a close friend of Stephen T. Mather and Horace M. Albright, cofounders of the National Park Service, and in the 1920's his San Francisco apartment was the unofficial western headquarters of the National Park Service.

Because of his many contributions to the Sierra Club, it is difficult to appreciate that he carried on a full-time accounting practice as a partner of Farquhar and Heimbucher and that he worked with many other organizations with the same enthusiasm as he did with the Sierra Club. He served as president of the California Academy of Sciences, the California Society of Certified Public Accountants, and the California Historical Society. He received numerous awards and honors, including an honorary degree of Doctor of Humane Letters from the University of California at Los Angeles.

Francis Farquhar personified the traditions and principles of the Sierra Club. For over three decades, he inspired, encouraged, and showed the way. Today the Sierra Club reflects the excellence of the example he gave.

Nicholas Clinch

Smog and Politics in Los Angeles

WILLIAM GREENBURG

THAT PALL WE USED TO SEE hanging over downtown Los Angeles when we used to ride the bus down from Hollywood in 1948 has now spread over the entire basin," said Gladys Meade, the first citizen-activist ever named to the state Air Resources Board (ARB). She was later sacked by former governor Reagan. The basin she referred to is a vague geopolitical area bounded by the Pacific Ocean on the west, hemmed in by the mountains on the other three sides, and hermetically sealed much of the year by a chronic inversion layer of warm air. Known as the Los Angeles Basin, this huge air trap extends from the coast some 80 miles inland. Officially called the South Coast Air Basin by the state, and the Los Angeles Air Quality Control Region by the federal government, the basin is one of the worst air-pollution zones in the world. All year round, but especially during the summer, when an enormous high pressure system sits off the Pacific Coast, smog is a constant and daily oppression to the residents of the region.

Today, smog is spilling beyond the brim of the basin, over the mountain walls into the deserts beyond. The desert community of Indio, California, is about 150 miles from downtown Los Angeles and some 75 miles beyond the eastern fringe of the Los Angeles Basin, yet by September 30, 1974, Indio had registered 723 hours when the smog level exceeded the state standard, more hours than anywhere else in the state. Palm Springs, Indio's wealthy neighbor to the west, did not do much better, recording 702 hours when the state standard was exceeded. This is a far cry from the old days, when A. J. Haagen-Smith, the Caltech scientist who discovered the photochemical reaction that produces smog, was threatened with a lawsuit for daring to suggest that Palm Springs had a smog problem. Today, neither lawsuits nor the manicured greens of the exclusive country clubs are able to guard the rich against smog.

Victorville, another desert community, is separated from the Los Angeles Basin by a 9,000-foot mountain range, but by September 30, 1974, it had recorded 381 hours when the state smog standard was exceeded.

During the same period, Riverside, a city on the eastern edge of the basin, exceeded the standard for 330 hours; San Bernardino, a few miles north, for 397 hours, the worst year on record for that city. On June 21 and 22, 1974, the San Bernardino Valley suffered its worst smog attack in 15 years. Readings peaked at .69 and .71 parts per million of ozone for hours at a time. These levels are enough to make people sick. They are above the "never-to-be-reached" third-stage alert levels. The year before, San Bernardino, for the first time, registered average maximum hourly smog readings greater even than those of Pasadena, which is located right in the heart of the Los Angeles Basin smog cauldron.

In other words, despite all protestations otherwise by the Los Angeles Air Pollution Control District, a public agency that ranks in American mythology right alongside the Tennessee Valley Authority, smog is getting worse in most of the Los Angeles region despite some 30 years of pondering the problem. Why? Roger Harlow, the mayor of Indio and former head of the Regional Antipollution Authority, a onetime private organization that has now been incorporated into the Coachella Valley Association of Governments, provided a succinct answer when he described smog as "a scientific problem in a political context." In other words, contrary to the traditional wisdom of many agencies, smog cannot be eliminated by technological solutions alone. For of all the issues involving environmental, economic, and political considerations, air pollution—especially in Los Angeles—may be the most complicated. Four counties, dozens of cities, and numerous federal, state, and local agencies are engaged today in a jurisdictional dispute and debate over control strategies that has become so heated that it is almost impossible to tell where science leaves off and politics begins.

On August 23, 1974, after exchanging information for six months to determine which agency has the best strategy for controlling smog in the Los Angeles Basin, the Environmental Protection Agency (EPA) and the Los Angeles County Air Pollution Control District (APCD) issued separate statements showing that they were still far apart on many issues, and that not enough data were available to determine which of them was correct. Their philosophies are 180 degrees

As the polluted air of Los Angeles fills the entire basin and spills eastward to the desert, a question arises: will politics and public pressure permit the cleanup to which so much lip service is paid?

apart; their relationship has been very bitter.


Their present squabble began two years ago when the EPA first entered the arena by suggesting that the only way to reduce smog in the Los Angeles region was to restrict automobile use. Local officials in the area, even those who have no love for the APCD and who have themselves been in the forefront of the smog fight, have accused the EPA of moving in like "gangbusters." But the fact of the matter is that the EPA, despite some tough public statements, would have preferred to stay out of the controversy for awhile, but was forced to enter the fray in response to a lawsuit filed by the Center for Law in the Public Interest on behalf of the cities of Riverside and San Bernardino, both of which are outside Los Angeles County.

The state of California was to have turned in an implementation plan for smog control by the end of 1971, and when it failed to do so the EPA was then supposed to submit one of its own by July 31, 1972. The EPA also failed to come up with a plan, but in the words of David Calkins, deputy chief of air and water planning for EPA region nine, "It should have." So when the EPA was sued, Calkins explained, "We had nothing to stand on to justify the one-year extension, and the court ordered us to come up with a plan." The court order came at the end of 1972. EPA moved into the basin in 1973 with a directive that jolted the very roadbed of the Hollywood Freeway.

The EPA said that gasoline rationing would be necessary in order to cut down automobile use enough to clean up the air, an audacious pronouncement that was greeted with a storm of protest. So the EPA rescinded the directive and substituted one that called instead for surcharges on downtown parking lots. This one met an equal storm of protest. In December, 1973, the EPA also cancelled this order.

This second retreat was announced during a hearing in San Francisco on still another strategy for reducing automobile use—complex-source control (called indirect source control in California). The theory behind this strategy is that building projects such as highways, airports, stadiums, and shopping centers generate increased motor-vehicle use, which, in turn, generates more air pollution. So, the complex-source control program calls for the

William Greenburg is environmental reporter for the San Bernardino Sun Telegram.



I breathe
for taste.

I live in
Los Angeles
County, California.

Warning: The Surgeon General Has
Determined That In Certain Regions
Breathing Is Dangerous To Health.

Steve Johnson

EPA or local governments to review each such project to determine whether or not it will contribute to air pollution, and to forbid it if it will. Like the other EPA programs, this too has met with stiff resistance in the Los Angeles Basin.

The basis for resisting all the EPA strategies is the comforting belief, adamantly proclaimed by the APCD among others, that technology alone can solve the air pollution problem. Naturally, everyone would be relieved if this were true, if, say, a miracle in Detroit, such as—for starters—a clean internal-combustion engine, could solve the smog problem in Los Angeles. Not only does this belief get everybody off the hook by throwing the responsibility for eliminating smog solely on the shoulders of the auto makers, but it banishes the fearsome specter of having to somehow alter one's lifestyle. But technology alone will not solve the smog problem, for as Roger Harlow said, it is "a scientific problem in a political context." When this premise is admitted, or at least acknowledged as possible, the ante that has to be paid for clean air is upped exponentially. This is the crux of the debate between the EPA and the APCD.

While the Los Angeles Air Pollution

Control District continues to debate the EPA over the question of philosophy and strategy, it has also been feuding with the state Air Resources Board (ARB) over whose technique for measuring smog is most reliable. This dispute began last year when it was discovered that the measuring devices used by the APCD were recording smog readings some 30 percent lower than those of the state, even when the two were placed side by side. ARB claimed its readings were more accurate; the APCD replied that no one really knows which readings are correct. This dispute centers on how instruments that measure ozone, that elusive major component of photochemical smog, should be calibrated. The discovery that different methods were in use has thrown off the basis for determining the smog levels at which the health of various segments of the population are adversely affected. A special committee was appointed to resolve the dispute by 1975.

Meanwhile, Dr. James N. Pitts, director of the Statewide Air Pollution Research Center at the University of California at Riverside, set about to resolve the dispute himself. Three weeks later, he declared at a press conference that the state figures were

more accurate, remarking "My team don't owe nothing to nobody." Pitts, however, ended up with some egg on his face, and acknowledged that his results were off. After redoing his work, it was declared in line with a sophisticated technique used by the committee to obtain a primary source of ozone. The committee issued a preliminary report stating that the APCD was more accurate, but the ARB method more precise. Although the report left APCD officials elated, it left a lot of people scratching their heads, for it also declared that while the district's readings were more accurate, the state's method was more precise. The special committee recommended that the state method be used to calibrate instruments—with the addition of a correlation factor. It appears that both sides have won, but one disgruntled scientist claims that both sides are still wrong and that the special committee's report contained a lot of "face saving." The rest of us will have to wait and see. The waiting has taken on an added element of doubt because it has been revealed that the APCD changed its procedure during an experimental program established to reconcile the difference.

REGARDLESS of what is on the state flag, the automobile, not the bear, is the symbol of California, and economic growth has been the religion. But increasingly, heretics have appeared in the state, sometimes in unexpected places.

Denis Hansberger, a San Bernardino County supervisor, member of the South Coast Air Basin Coordinating Council, and co-chairman of the air pollution task force for the Southern California Association of Governments, said that at one time, growth for growth's sake was the Gospel. "It is no longer the Gospel. You can't have wall-to-wall people from the oceans to the mountains."

Not long ago, such views were unheard of in the halls of local government, but increasingly Californians are beginning to recognize that if the smog problem in Los Angeles is going to be solved, changes in the way people live are inevitable. William Simmons, executive director of the California Air Resources Board, said "that regardless of what the Los Angeles County Air Pollution Control District says, by our calculations, by 1985, growth will catch up with emission reductions and we have to try to get on top of growth now."

Though the EPA has become hated by many in the area for its programs, it was not the first agency to suggest that air pollution cannot be licked by technology alone. In September, 1970, the technical advisory group to the California Air Resources Board issued a report called "Ambient Air Quality Standards Applicable to All Air Basins," which said that the best estimates showed that even with the proposed 1975 auto-emission standards in effect, smog levels in Los Angeles will probably be greater than both the federal standard of .08 parts per million of ozone and the state standard of .10 parts per million. "Even by 1985," the report concluded, "ten years after these stringent auto-emission standards may be implemented, the oxidant level in Los Angeles will probably be .20 or .25 parts per million." (.20 ppm is considered the level where chronic lung problems are aggravated. The very young and very old are the first affected.) The report then says that such levels will occur unless "drastic changes are made," changes such as limiting motor vehicle and aircraft use, making steam plants and industry emissions free, developing nonpolluting urban transit systems, and by limiting population growth "by sharply restricting subdivisions and residential expansion in the basin."

"The impact of these requirements staggers the imagination," the report concludes.

And also the pocketbook, for no matter where one sits in relation to the smog issue in the L.A. Basin, the dollar figures are astronomical. The mayor of Riverside indicated that even a ten percent cut in vehicle use would produce significant unemployment in his city, and most talk centers not

on ten percent, but on 20 to 25 percent. But even this reduction may not be enough. Pressed as to the amount vehicle-miles-traveled would have to be reduced to achieve air-quality standards in the L.A. Basin, George Taylor, deputy ARB chief, told a parking-management seminar in Newport Beach: "90 percent."

And just how much money is at stake in this debate? A look at the value of building permits gives some idea. In 1971, the value of building permits in San Bernardino County was \$225.2 million; in Los Angeles County, nearly \$2 billion. To such sums, we can add real estate values, automobile and gasoline sales, county highway budgets, and a host of others.

But if air pollution control is expected to cut into some segments of the economy, air pollution itself has already cut into others. For example, the California Department of Agriculture has estimated that in 1970, citrus losses in the Los Angeles Basin from smog damage were nearly \$20 million, while in 1968, statewide crop losses from smog amounted to \$248 million. One estimate by a University of California economist has placed the cost of all types of smog damage—agriculture, health, damage to forests—at \$336 million a year in the greater Los Angeles region alone.

Finally, air pollution control has itself given birth to an economy of its own that would also suffer if air pollution were no longer a problem. The San Bernardino Air Pollution Control District's 1973 budget was \$695,303, while that of the state Air Resources Board this year is \$16.6 million. The Statewide Air Pollution Research Center in Riverside is supported by about \$1 million in research grants. A Rand Corporation contract from EPA for air-pollution-control analysis in San Diego County amounted to \$450,000.

But money aside for the moment, the quandary over what to do about smog is also rooted in the gut political differences that exist in the basin. The seemingly infinite number of local governments and special districts in the area have fought each other for years, often over water rights, now over smog.

The inland counties of San Bernardino and Riverside contend that smog is born in Los Angeles and Orange counties and then borne inland. Even so, the San Bernardino County Board of Supervisors, for example, is loath to relinquish any of its authority in the fight against smog. The rhetoric really begins to fly when someone suggests that smog control requires regional land-use planning. Local officials, as well as the EPA, have made it clear that they are not in love with the Southern California Association of Governments, a planning agency they see as a potential regional government.

Yet local governments cannot lick the smog problem by themselves. As San Ber-

nardino mayor W. R. Holcomb told a public forum last spring, any local government that thinks so is in "dreamland."

"Most politicians are really paranoid over the concept of local control," Holcomb said. "It is not very popular to talk about it. Local jurisdictions politically cannot meet the problem head-on. Any local mayor who tells property owners they cannot develop property is not going to stay in office long. Local politicians could never stand that kind of heat, even though local developers are in the minority."

But as Riverside County supervisor Norton Younglove observed, "If we are going to raise hell about development in another county, we must do it in our own. I'm afraid we have somewhat of a double standard going." Younglove is past president of the Southern California Association of Governments.

The dilemma for local politicians and their constituents was succinctly put by the Riverside County Grand Jury in a report issued last April: "If an enforcement agency . . . is doing the work it is supposed to do, it is evident and inevitable that those individuals or businesses who are warned or cited will sometimes be highly agitated. It is understandable that taxpayers would look to the board of supervisors for relief or redress. In their concern for the economic welfare of the county . . . and the support of their constituents as individuals, the supervisors then find themselves having to turn to the APCD and its director for resolutions—thus creating the proverbial vicious circle.

"The APCD and its director are, in actuality, responsible to and under the supervision of the APCD board—an entity separate and distinct from the board of supervisors. But the supervisors have appointed themselves as the APCD board and are, consequently, in the untenable position of requiring, on the other hand, that it not do it too well."

Dino Papavero, president of the steelworkers local at the Kaiser mill in Fontana, a city just west of San Bernardino, said that those who advocate clean air are correct, but that the supervisors have to satisfy the whole county, and the economic equation is unbalanced on the side of industry and jobs. He said that federal money and authority are needed to balance the equation.

Vested interests, of course, are just as often based on emotional needs to guard one's turf as they are on exclusively economic considerations. Money alone does not explain why local government officials are generally so hostile to regional agencies, or why the Los Angeles County Air Pollution Control District is so hostile to the EPA. The APCD, the first public agency of its kind, stands at the center of the smog controversy in the Los Angeles Basin.

The district office is housed in an old

building that resembles a warehouse in a district of warehouses and produce markets just east of downtown Los Angeles. One district official said that the supervisors refused to move the agency to a new building in the civic center because they did not want to build a monument to smog. He added that the old building is very sturdy and has survived some tough earthquakes. The old building may turn out to be the only thing left of the district to survive the political tremors that have been increasing in force over the last two years.

Without a doubt, the once powerful APCD is now facing its toughest challenge. Throughout the turmoil of the past few years, the agency has stood fast, declaring that its air pollution control philosophy was not only correct, but beyond question. It took every critical analysis or probe as an insult. It has continued to view notions about the relationship between smog and growth as just so much nonsense. The view of deputy district chief Robert Barsky on the matter is typical: "You don't have to cut down on traffic or stop growth." Like most air pollution control districts, the APCD has steadfastly maintained that the motor vehicle alone is at the heart of the smog problem. But then, these districts are by statute responsible only for stationary sources. By blaming everything on the automobile, they rid themselves of responsibility and of having to face up to problems.

The EPA's quarrel with the district has been based on the federal agency's belief that the district's strategy has been too narrowly focused on Los Angeles County alone. The EPA claims that the entire L.A. Basin must be considered as a single airshed, and that all sources of pollution, both mobile and stationary, must be part of an overall control strategy. According to the agency, the district's persistence in this belief has even led it to deny that smog produced in Los Angeles County moves inland to infest other counties. For example, in the fall of 1973, district chief Robert Lunche called such a notion "superficial." But now the district denies it has ever claimed that smog produced in Los Angeles County does not move into other counties. In fact, studies using tracer elements have shown that emissions do move inland, though some of the researchers point out that the inland counties are not entirely blameless.

In the fall of 1973, Lunche made a presentation to the coordinating council of the South Coast Air Basin, in which he claimed that steady progress was being made toward desired air-quality goals. After his talk, Victor Magistrale, senior environmental planner for the Southern California Association of Governments, asked Lunche whether the presentation referred to the entire county or just to downtown Los Angeles. Lunche acknowledged he was just referring to the downtown area.

But by 1974, the district had begun to

back down on several positions. For example, the statements released by the district and the EPA last August said that the agencies now agreed that both mobile and stationary sources must be included in an inventory of emissions in order to come up with a pollution-control strategy. In fact, rather than representing a compromise, this agreement was a major shift by the district to the EPA's position.

But the dispute continues. The EPA has also challenged the district on the geographic area used to obtain data that could be used for a basinwide pollution-control strategy. The EPA bases its own analysis on data obtained from 2,000 square miles in the basin. The district obtains its figures from a 62-square-mile area around downtown Los Angeles and claims that its figures can be extrapolated to apply to all areas in the basin, this on the basis of an equation the EPA calls the "Hamming Transform" after former chief analyst for the district, Walter Hamming. EPA officials claim they have never seen the basis for the transform, and Dr. Joel Horowitz, acting director of policy analysis for the agency, says that the origin of the Hamming Transform is not explained in any district papers he has seen.

At an October EPA meeting in North Carolina, Hamming presented his scientific basis for the Los Angeles County district's smog control strategy. For the better part of an hour, he filled the blackboard with graphs and equations, with slides to boot. The big meeting room was tense and the scientists sat motionless. When Hamming finished, the host of the meeting, Dr. Basil Dimitriades, chief of the atmospheric reactivity section of the chemistry and physics laboratory at the EPA center, rejected Hamming's work out of hand. The strain of the moment was obvious as Dimitriades said during an interview that Hamming's work was "totally unacceptable scientifically." EPA's Horowitz, who was at the meeting, said he did not understand what Hamming said and did not think anybody else at the meeting did either.

Caught in the middle of jurisdictional disputes between federal, state, and county agencies; between local governments and regional agencies; between one county and another, the public is understandably confused. Bombarded by opposing arguments about Hamming Transforms and calibration techniques, most residents daily grow more disillusioned as smog records continue to be broken each year. Faced with the prospect of a possible radical change in attitudes about economic growth and automobile use, many people, like their elected officials, have grown increasingly uneasy, even irate. For if the LAPCD falls, if the EPA turns out to be correct in its strategy, the changes that the future will bring to the habits and attitudes of Southern Californians may be profound.

CALL FOR CLUB COMMITTEE NOMINATIONS

TO DEVELOP wider membership participation in the work of the club committees and to make a greater use of the expertise of the club membership, I am asking members to consider the committees listed below and, if they, or someone they know, would be capable and desirous of serving the club as a committee member, to send name, address and relevant background information to me, care of the Board/Council Office, 220 Bush Street, Rm. 1050, San Francisco CA 94104. The executive committee of the board will be reviewing and evaluating the club committees at their March 15-16, 1975 meeting. Since part of the evaluation must be: "Do we have the interest and expertise for this committee to be viable and make a positive contribution?", we would like to hear of your interest by the March date.

The currently active internal committees are: budget; *Bulletin*; Clair Tappaan Lodge; financial advisory, administration and investment; history; honors and awards; insurance; judges of election; membership; mountaineering; nominations; outing; publications. Authorized but currently inactive Internal committees are: library; lodges and lands; public information. The currently active conservation (issue) committees are: economics (being organized); energy; environmental education; international; land use; water resources; population; wilderness; wildlife. Authorized but currently inactive conservation committees are: forest practices; labor liaison; marine and coastal; mining and minerals; native American issues; transportation.

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insider... news of the members and their club

The Other Side of the Outing Program

PERHAPS THE ONE ACTIVITY that most distinguishes the Sierra Club from other conservation organizations is its comprehensive outing program. The national and international outings graphically portrayed in last month's issue of the *Bulletin* are familiar to all—club members and the general public alike. Not so well known, however, are the hundreds of Sierra Club outings that are conducted every week of the year by the 45 chapters and their more than 200 organized regional groups and special activities sections. Most are one- or two-day week-ends—day hikes, bike rides, canoeing, overnight car campouts, backpacking, cross-country skiing, or rock-climbing.

Chapter and group outings, however, come in a profusion of shapes and guises. Some serve well-defined club purposes. The PACIFIC NORTHWEST CHAPTER, along with other conservation allies, ran more than a dozen outings in September and October to gather facts on the suitability of roadless areas in the Cascades and the Oregon Dunes for inclusion in the National Wilderness System. GORDEN SWENSON of the UINTA CHAPTER conducted similar survey trips into wild sections of the Glen Canyon National Recreation Area in southeastern Utah. Other outings serve unique needs and are adapted to the geographic, demographic, or climatic conditions of their particular regions.

A Flip Flop Hike and Pollywogs

NOT MUCH in the way of wilderness study outings can be run in heavily populated metropolitan regions. But that happens to be where a good portion of our membership lives, and many big-city chapters and groups are offering viable Sierra Club outings within the confines of their areas. Here's a sampling culled from newsletter outing schedules:

NEW JERSEY CHAPTER—Nov. 10—Flip flop hike in Harriman State Park... Our guide flips a silver dollar—heads to right, tails to left. At 2 p.m.... we bush out. Possible never return.

SAN FRANCISCO BAY CHAPTER, MT. DIABLO GROUP—Oct. 19—Briones Regional Park: A Children's Special... for kids up to ten... climb up to Briones Crest, hunt for frogs and pollywogs at Sindich Lagoon.

GREAT LAKES CHAPTER (Chicago)—Oct. 27—Stream Nature Workshop... a chance to learn about common stream life... plan to get wet.

POTOMAC CHAPTER (Baltimore-Washington)—Oct. 12-13—Shenandoah National Park Children's Backpack. Watch the bears, pick berries, and climb Old Rag. Bring a parent.

A random perusal of those newsletters further reveals a number of offbeat or unusual outings that are natural for their regions. The JOSEPH LECONTE CHAPTER featured a "Miniwilderness overnight for neophytes and lazy folk!" in South Carolina. Spelunking (or caving) outings are frequently enjoyed by Sierrans in the CUMBERLAND, TENNESSEE, and TEHIPITE chapters. Popular among OZARK CHAPTER members are their float trips along such tree-lined, quiet-flowing streams as the Eleven Point, Courtois, or Buffalo. Both a Northwoods Geology Weekend and an Introduction to Cold-Weather Camping are outings that cater to the special needs and interests of the Minnesotans in the NORTH STAR CHAPTER. And finally, to get into shape for skiing, members of the SOLANO GROUP of the REDWOOD CHAPTER were invited to go on a four-mile regional park jog "in a cloverleaf pattern around several hillocks providing great views and fine jogging."

All of these local-level outings have the same overall purpose as the national outings: to give people the opportunity to know and enjoy wild and natural areas so that they will come to realize that they have a personal stake in keeping those areas unspoiled. Such outings, just as on the national level, also serve as an effective means to recruiting new members. (That's how my family and I got hooked in 1963!) In addition, they contribute to the national outing program in two ways. First, local outings provide basic training for leaders, many of whom go on to lead the more extensive and more demanding national outings. Secondly, such local outings serve as testing grounds for national trips, either into new areas or in the promotion of special activities—or both.

A Pioneering Outings Plunge

A new area—in reality a radically new environment—and a new activity were pioneered by a special organized section of the LOMA PRIETA CHAPTER. As a result of its work, the 1975 Outing Issue listed seven quite out-of-the-ordinary outings. Perhaps they should be called "in-ings" instead of outings, for all are underwater exploration trips. The seven "in-ings" are staffed chiefly by trained and experienced leaders of the LOMA PRIETA DIVERS, some 250 scuba-diving and snorkeling Sierrans from the Palo Alto-San Jose area south of San Francisco. KENT SCHELLENGER, the dive section's chairman, tells how his divers were able to combine their sport with a meaningful conservation effort in a project that led to the firm establishment of diving in the national outing program. Kent, now chairman of the underwater exploration subcommittee or the club's national outing committee, has led several national outings.

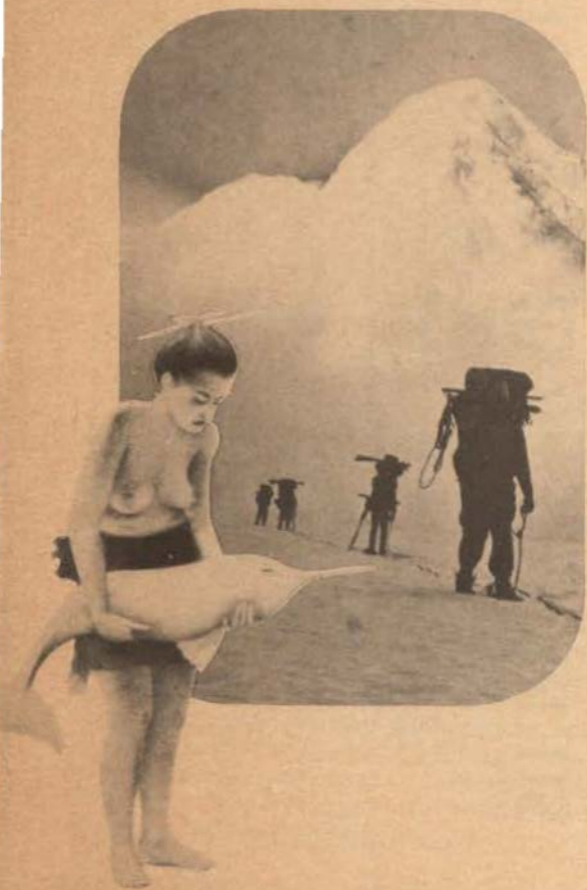
The dive section, Kent reports, came of age when it accepted a call for volunteer help from the California Department of Parks and Recreation. The department's Monterey district officials had been seeking to expand the existing underwater park at Point Lobos to include much of Carmel Bay. But first they had to submit a "survey of resources." That's not much of a problem on land. A survey under 30 to 100 feet of cold Pacific water, however, is another matter. That kind of study takes both time and highly trained manpower, and consequently money, which was not forthcoming from the state. So when the officials asked for volunteer help, the divers dove in.

DR. STEVE WEBSTER, a marine biologist and dive section member, headed the volunteer effort and prepared a list of 40 "indicator organisms." Teams of divers each were assigned a set of the 40 species to learn to recognize and then systematically began recording the numbers and varieties of species they encountered on their random courses across the inner space of the proposed park. "It was just what we needed," said one park official later.

The dive section has not let up on its work for the environment. A kelp survey for the state's fish and game commission is ready to go as soon as funds are available, and other marine biology research projects are in the planning state. Meanwhile, the traditional skindiving interests and activities of the members are being pursued vigorously. The section offers diver training and opportunities for underwater photography as well as one-day diving trips and weekend camp-and-dive outings.

If you should decide to sign up for one of the seven 1975 underwater exploration national outings to the Caribbean, Mexico, Hawaii, or the Galapagos Islands, you will have a chance to get acquainted with some of the underwater pioneers from the LOMA PRIETA dive section and you will have all of them to thank for the opportunity to explore and experience a new dimension of life—within this planet.

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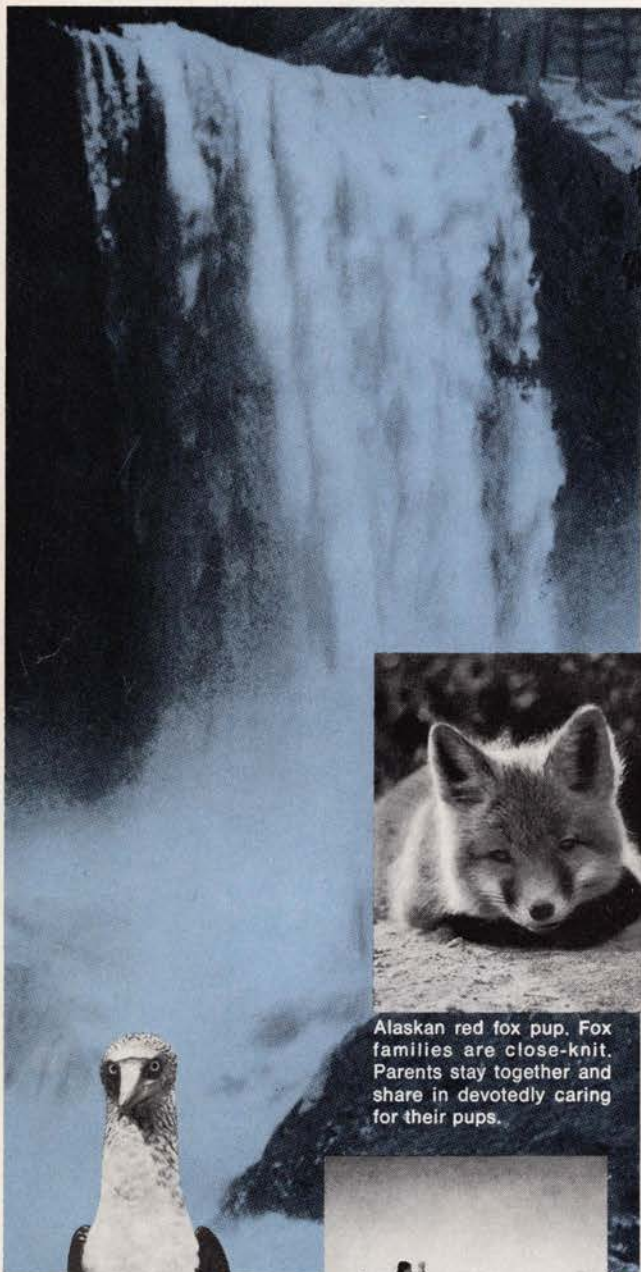
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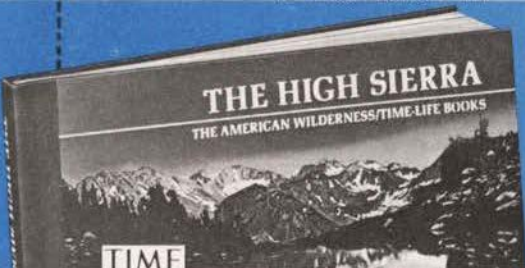
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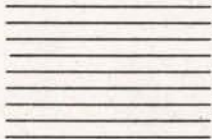
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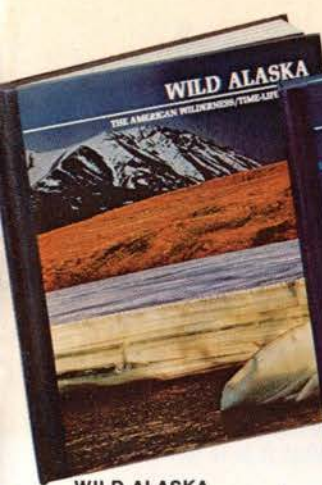
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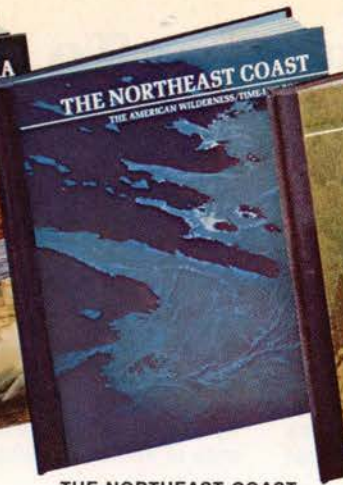
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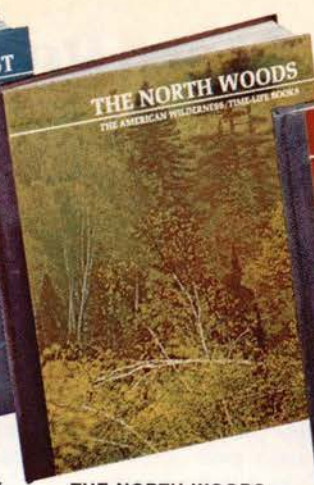




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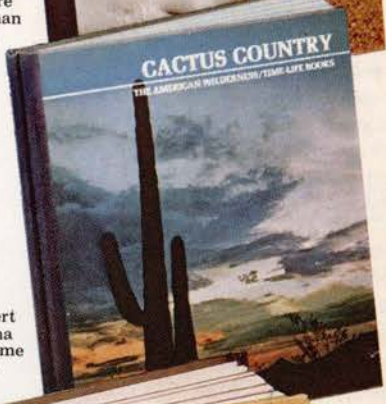
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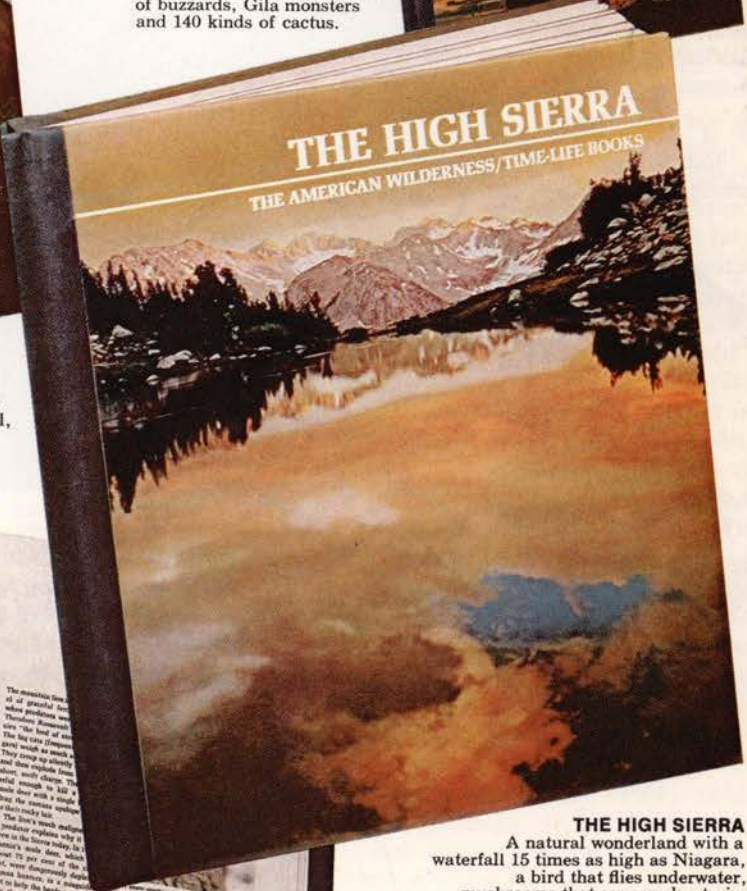
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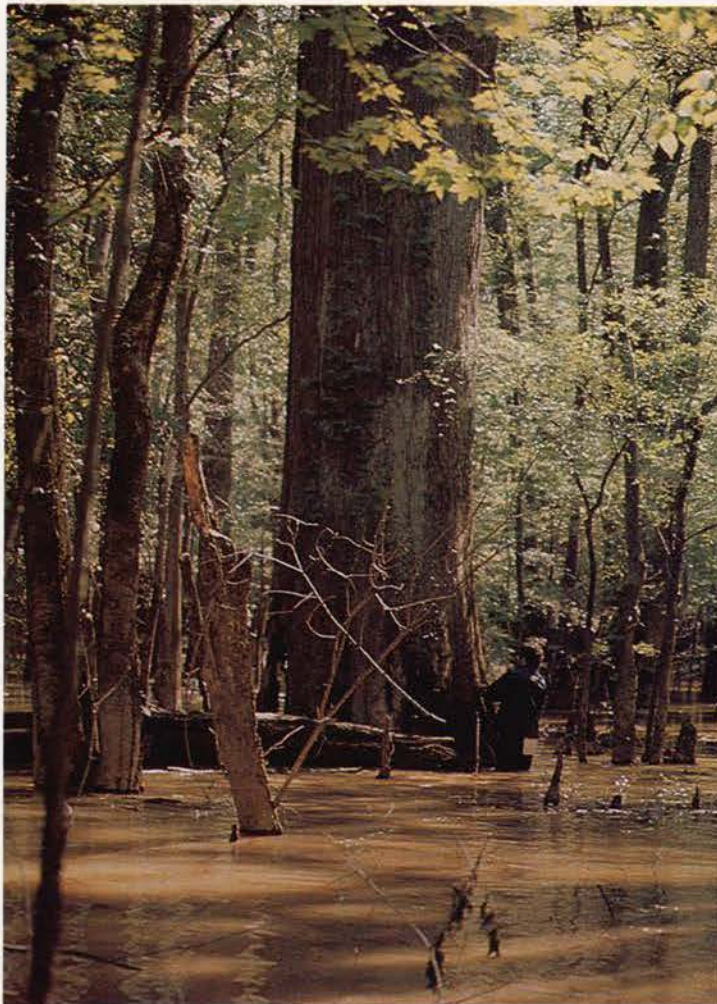
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THE CLIMAX FOREST OF THE CONGAREE SWAMP

JOHN V. DENNIS

WHEN OFFERED an assignment to explore a big river swamp in South Carolina in 1965, I lost no time in accepting. I had never heard of the Congaree Swamp and could not even find it on the map, but in those days almost no one outside the National Park Service had heard of the swamp. Within the last several years, however, thanks largely to efforts of the Sierra Club, the Congaree Swamp has begun to receive the national attention it deserves. In 1974, a Congaree Swamp National Preserve Association was formed, with the objective of preserving 70,000 acres as part of our national park system. The proposed Congaree Swamp National Preserve would be similar in concept and status to the recently authorized Big Thicket National Preserve in Texas.

In many ways, the history of the Congaree Swamp, which lies along the Congaree River southeast of Columbia, South Carolina, is similar to that of the Big Thicket. Both are wilderness areas near large population centers, and attempts to preserve both have been bitterly resisted by timber interests. If anything, the Congaree Swamp offers more real wilderness than the better-known Big Thicket, for the swamps and bottomlands that lie along the Congaree, Wateree, and upper Santee rivers of central South Carolina have not been



subjected to as many pressures as those of the Big Thicket.

Most important from the standpoint of saving wilderness, the Congaree Swamp contains the largest tract of climax swamp forest in America. Some 11,000 acres must look almost the same as did bottomland swamp forests at the time of Columbus. Here are bald cypress trees, hundreds of years old, with trunk circumferences up to 25 feet. Oaks, sweetgum, lob-

lolly pine, cottonwood, hickory, water tupelo, and other species from this little-explored river swamp have furnished six national champions and 24 state champions. Additional champion trees will surely be discovered as the forest is searched more thoroughly.

The loblolly pines must be mentioned in any account of the Congaree Swamp. In a mature forest, hardwoods tend to crowd out the pines. But in the Congaree, loblolly pines and hardwoods have been growing side by side for hundreds of years and still the pines have not yielded to competition. They thrive, growing larger and living longer here than anywhere else, so far as we know. As determined by ring counts, some of the Congaree pines are more than 300 years old. Normally, it is exceptional to find a loblolly that is even as old as 200 years. The Congaree loblolly that is presently a candidate for

national champion has a circumference of 15 feet 10 inches, and its height is 144 feet. Some of the Congaree pines reach a height of 160 feet.

No one knows how the pines became established here or why they have lived so long. In a Nature Conservancy leaflet on the Congaree Swamp, I wrote: "How the loblolly got its start in the swamp originally is a mystery. It has been suggested that during a series of drought years

the swamp became dry enough to permit the entry of fire. A tremendous conflagration may have opened up parts of the swamp enough to allow seeding by loblolly pines and room for good growth. If this is the explanation, the event has probably happened several times during the past few hundred years. There appears to be more than one age group represented: many around 180 years old and others around 300 years old. It is interesting to read in a book on southern trees by Charlotte Green that a severe drought, as determined by rings on an ancient cypress tree, occurred around 1786. This event, 180 years ago, coincides with one age group of Congaree pines."

The Congaree Swamp and adjacent bottomlands are also rich in wildlife. No other interior swamp along the middle Atlantic coast has such a long list of rare and endangered species. Until 30 or so years ago, the Santee River was suspected to be the haunt of the now-extinct Carolina parakeet, and some naturalists still hope to find the almost-vanished ivory-billed woodpecker in these central South Carolina bottomlands. The panther, or mountain lion, might also survive here. No one is too surprised to see such species as alligator, bald eagle, osprey, swallow-tailed kite, Mississippi kite, and Swanson's warbler in this large wilderness area.

Though swamps are not dangerous places, they demand, as do all wilderness areas, respect and care from those who venture into them. Minutes after entering a swamp, the visitor finds himself in another realm, a world of winding watercourses, grotesquely shaped cypress knees, and moss-draped trees. One finds few easily recognized landmarks and must take care to avoid becoming lost. A compass is the most vital piece of equipment to carry in a large southern swamp.

Traditionally, swamps have been depicted as worthless unwholesome places, teeming with snakes and inhabited by fugitives. There are snakes, of course, but some people have the impression that snakes are more plentiful in swamps than elsewhere. Perhaps snakes are only seen more easily in swamps, for they are apt to be sunning themselves on logs or leaving a wake behind them as they swim across a stream. Most are harmless water snakes, although occasionally

a cottonmouth will be seen. A herpetologist friend of mine ventured the opinion that snakes are relatively uncommon in swamps because there are so few rodents on which to feed. Only reptiles that subsist on fish and frogs can make a good living in swamps.

As for outlaws, swamps are seldom havens for today's fugitives because they know nothing about surviving in such places. The only swamp outlaw I ever knew was a reformed individual who was said to have killed two—maybe three—men during his lifetime. He lived in a picturesque cabin at the edge of one of the large swamps of the Big Thicket. Whenever I passed that way, I would drop in for a cup of coffee and a chat. This man was a keen observer of nature and told me much about the wildlife he had encountered in his wanderings through the swamp.

There is a comparatively harmless breed of outlaw who sometimes selects the swamp to ply his peculiar trade. As evidenced by abandoned stills, the Congaree Swamp was formerly a haunt for moonshiners. The stills were usually located on high ground, the most favored sites being Indian mounds as well as another manmade earthwork known as cattle mounds. The latter were mounds built by slave labor as safe havens for cattle during times of high water. One can picture the frantic activity when cattle were driven to these mounds as the river began to spill over its banks. A typical cattle mound that I measured was 100 feet long, 50 feet wide, and six to seven feet high. Trees growing on these mounds are apt to be at least 125 years old. Several tree species that do not occur elsewhere in the swamp are found on these mounds.

Probably the most difficult task in preserving swamps and bottomlands is to persuade people that they are worth saving. Increasing numbers of people now recognize that swamps, along with marshes and coastal wetlands, not only offer opportunities for solitude and recreation, but are essential components for the earth's life-support system.

When silt-laden floodwaters from the uplands begin racing toward the coast, the river swamp fulfills its most important function. It absorbs the overflow like a sponge. During normal times, the small streams that lace the swamp discharge their waters into the river. But as the river begins to

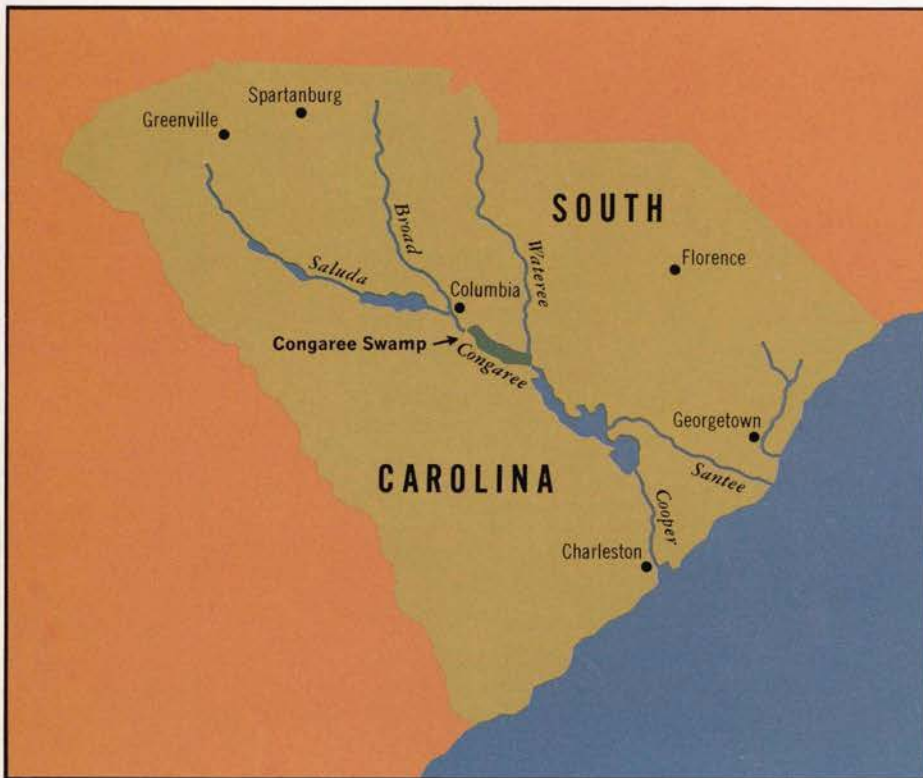
reach flood stage, the flow in the streams and sloughs reverses. Water begins flowing back into the swamp, spilling into depressions, which act as reservoirs. A large swamp, such as the Congaree, absorbs a tremendous amount of water. Not only does water fill every slough, pond, and oxbow lake, but large quantities also are taken up by the root systems of the trees or absorbed by the ground.

Some species of trees and shrubs—cypress, water elm, water ash, water poplar, water tupelo, and buttonbush—can grow in standing water the year round. It is the element in which they do best, though for propagation, cypress and many other water-loving plants require a period when the soil is free of standing water. At a slightly higher elevation, only a foot to three or four feet above the average level of the sloughs and ponds, are oaks, hickory, maple, sweetgum, sycamore, ash, elm, sugarberry, and cottonwood. Adaptations that many of these trees show to swamp conditions are buttressed trunks and massive root systems. Flooding, so long as it is not too prolonged, is no hardship to these trees. In fact, the flooding provides the moisture and nutrients that enable trees in the Congaree Swamp to grow to almost unheard-of proportions.

As the river begins to return to its banks after a period of flooding, the streams and sloughs again reverse themselves and pour water back into the river. This time, there is not so much water, and it is cleaner and purer than it was. The swamp is an enormous settling basin where silt and pollutants are filtered out and disposed of to a very large degree.

Charles H. Wharton, in a 1970 Georgia State University publication entitled "The Southern River Swamp," cites several examples of even small swamps contributing greatly to the water quality of Georgia streams and rivers. Studies by Wiley Kitchens at the University of South Carolina's Baruch Institute show that the Santee swamp significantly improves the water quality of the Wateree River. This is not to suggest that we can pollute a river with impunity merely because a swamp happens to sprawl downstream, but given our habit of doing so in any case, it is foolish to destroy or alter the natural filtering mechanism provided by a swamp. Already in South Carolina, hundreds of thousands of acres of





bottomland forest and swamp have been permanently destroyed by reservoir projects. The value of the river swamp is incalculable in terms of flood control and removal of sediment, pollutants, and even many pesticides. But try telling any of this to the U.S. Army Corps of Engineers or any of the other dam builders and river channelizers.

The big trees of the Congaree Swamp are giants that astound everyone who sees them. They are the closest thing that we in the East have to the redwoods of California. As one of the few naturalists who have had the privilege of spending months in this swamp camping, hiking, boating, and observing nature, I have especially strong feelings about saving the big trees of the Congaree. Many others share my feelings.

For at least 40 years, Harry Hampton, a veteran woodsman and ardent conservationist who lives in Columbia, has devoted much of his time to the swamp. He knows its remotest parts, where to find wild turkeys, the best places to fish, and its lore and legends. Thanks to Harry Hampton, the public, as well as the National Park Service, began to hear about the swamp. In 1959, the Park Service began to study the Congaree bottomlands as a possible unit of the park

system. Their report in 1963, recommended creating a 21,000-acre national monument that would include all of the near-virgin forest within its boundaries. Nowhere else, the report stated, did there exist such a truly remarkable combination of topography and vegetation so deserving of protection by the National Park Service. The report mentioned the urgency to protect this area from the threats of logging and from proposals to improve navigability of the Congaree River. Unfortunately, in 1963, very few South Carolina citizens had ever heard of the Congaree Swamp, and even fewer were concerned about preserving it. Therefore, the national monument was not established and the Congaree Swamp remained unprotected.

Except for some cutting of bald cypress around the turn of the century, the largest tract of climax forest in the Congaree Swamp survived unscathed an earlier era of exploitation—logging, reservoirs, or drainage—which claimed many swamp forests in the state. But about three years ago, a Sierra Club member, having hiked some distance into the forest, unexpectedly came to a clearing that had not been there before. Instead of huge trees, whose foliage had blotted out the sun, there was only desolation.

Splintered trunks, stumps five and six feet across, piles of sawdust, and gashes in the earth told the story of what was taking place. Trees that had withstood the perils of centuries were coming down. The climax forest is now being cut at a rate of 500–1,000 acres a year.

When news of the cutting reached members of the Sierra Club's Joseph LeConte Chapter, they launched a campaign to save the Congaree Swamp. Using everything from car bumper stickers to radio and television programs, the chapter is getting the Congaree story over to the public. Their efforts have been so successful that this swamp might soon be as well known as many of our more famous wilderness areas. Although conservationists continue to emphasize the importance of preserving the remaining 11,000 acres of climax forest, their current proposal for a 70,000-acre national preserve includes a wide variety of forest types in one solid tract along the Congaree, Wateree, and Santee rivers. Part of this area, the 18,000-acre Santee Swamp, is already owned by the state and is used extensively by the public for hunting, fishing, camping, canoeing, and boating. (Hunting is also allowed in the Big Thicket and Big Cypress preserves.) Many areas of Congaree Swamp would be opened to the public for the first time. The same activities as now enjoyed in Santee swamp would be allowed in the Congaree Swamp National Preserve insofar as they are compatible with keeping a fair amount of wilderness intact. Some areas might have limited usage to avoid disturbing bird rookeries or rare species. The public would learn quickly that swamps are not terrifying places after all. There is something in them for everyone, and these values would be saved along with the big trees.

John V. Dennis is a naturalist who has spent years studying the big trees of the Congaree Swamp.

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NEWS VIEW (Continued)

thus suggests that there is a real danger, ignored by the Forest Service and by Train, that last summer's spraying will have created a pest problem more serious than the one it was supposed to cure.

The controversial spraying, in which some 300,000 pounds of DDT were released, has recently been attacked on other grounds as well. *The Wall Street Journal* reported that Indians in the area who strongly favored the spraying are now requesting disaster relief to provide food for carrying their cattle, unsaleable because of high DDT levels, through the winter. The Forest Service warned hunters in the sprayed area that elk and deer fatty tissues could carry DDT levels up to six times the "safe" level of five parts per million.

Interior lists kangaroos as "threatened" species

Using for the first time its new authority under the 1973 Endangered Species Act, the Department of the Interior has designated three species of Australian kangaroos as "threatened species." The threatened designation, intended for use in cases where "imminent extinction" is not the danger, but rather eventual extinction, essentially prohibits all imports into the United States of products made from the three species, unless the Australian government certifies that the animals involved were killed as part of a sustained-yield program.

This prohibition is less rigorous than that invoked for so-called "endangered species," where imminent extinction is feared, and where no exemptions are permitted to the ban on imports.

OIL (Continued)

Management and Budget could be persuaded to forego bolstering the national budget with lease-sale proceeds and to use a share of this oil money for funding more meaningful environmental assessments. The "adequate planning" on which the writers of the draft statement frequently fall back in order to explain away all potential problems, would still be impossible because the department does not really know how much oil it has on its OCS lands, or where it is located. A program of federal rather than private exploration now has broad support, including that of National Ocean Policy Study, the National Academy of Sciences, and even outgoing Federal Energy Administrator John Sawhill, but only a comprehensive change in the Outer Continental Shelf Lands Act by Congress will actually bring this about.

Marine scientific resources in this country are not sufficient to launch simultaneous, in-depth, full-scale environmental assessments of every potential OCS oil and gas tract on our shores. Choices must be made and long

lead times provided, but this cannot be done while private oil companies jealously guard all the information about the location of the oil on these public lands. Only by performing its own exploration can the Department of the Interior know where impacts can be expected and where baseline studies are needed. Only when impacts are reliably

anticipated can coastal states be motivated to pass needed but resisted coastal-protection legislation. Only when the government still has the freedom to choose, before industry has invested billions of dollars on which it will demand a return, can government decide, for example, not to lease at all.

A Staff Report

Talchako Season

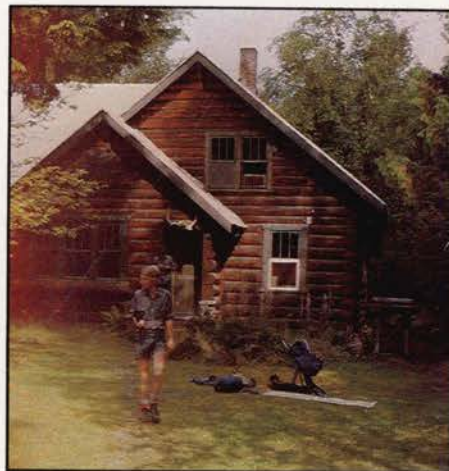
ALAN SCHMIERER

TALCHAKO LODGE, the Sierra Club Foundation's outpost in British Columbia's magnificent Coast Range, offers visitors a variety of wilderness adventures, including hiking, fishing, river running, viewing the abundant wildlife, and photography, all in one of the most dramatic mountain landscapes in North America. The lodge nestles in the glacially sculpted Bella Coola Valley, with its swift rivers, alpine meadows, and granite crags. Those who seek untamed wilderness will find it during their stay at Talchako Lodge.

Four hundred miles north of Seattle and 60 miles inland from the rugged Canadian coast, Bella Coola Valley and the surrounding wildlands are still largely unexplored and virtually unaffected by man's intrusion. The turbulent Atnarko and Talchako Rivers, which join just below the lodge to form the Bella Coola, are known for their clear, fast waters. Trout and salmon abound, and the rapids offer a constant challenge to whitewater enthusiasts and rafters.

Above the valley in all directions loom imposing granite tors and broad snowfields, where the experienced mountaineer and enthusiastic novice alike can find slopes and trails to match his ability and interest. For the casual walker and small children, there are sunny alpine meadows that abound with wildflowers and dense rain forests shrouded in moss and mystery. The array of wildlife is remarkable. Grizzly, black bear, moose, deer, and many kinds of smaller animals and birds are common in the valley. At the higher elevations one can see caribou, mountain sheep and goats.

The aboriginal inhabitants of the valley have left only mysterious petroglyphs and stone carvings to mark their sojourn, and Sir Alexander Mac-



Alan Schmierer

kenzie, the first white man to cross North America, carved his name near what is now Bella Coola in 1793. In the 1890's, Norwegian emigrants first settled the area, and one-third of the valley's present population are their descendants. Although this lovely river valley is situated at the southern end of Tweedsmuir Provincial Park, logging is still permitted, and the lower slopes are beginning to show the effect of the continued clear-cut operations.

But around the lodge, the valley remains placid and peaceful, an ideal retreat for the summer. Why not plan your own outing using the lodge as a base camp? The region can be visited from late May through the summer months and is accessible by air, coastal ferry, and Canada Highway 20, a gravel road that winds west from Williams Lake for 230 miles. The lodge's rustic accommodations include dormitory space (\$3.00 per night), community kitchen, hot and cold running water, and a spacious living room with fireplace; four outside cabins (\$10.00 each per night) are ideal for families. For further information contact the Sierra Club Foundation, 220 Bush St., San Francisco, CA 94104 or write Roy and Barbara Schubert, Caretakers, Talchako Lodge, Bella Coola, British Columbia, Canada.

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Made to fit the Human Fire-Plug or Jack the Bean-Pole. Frame it, squeeze it; load it for 20 lbs. Load it for 40 lbs. Your own grub, gear and goodies snuggle up against your back for sensual comfort. Balances out your act. Gerry-built and Gerry-rigged.

Let's take a look at it.

First we trumped up a new wrap-around, weight bearing hipbelt with a body hugging contoured profile. The lower sleeping bag compartment is leather bumpered. Rated for collisions up to 15 mph. The middle section has a Gerry-rigged zipper divider so you can have two compartments or one. Add on a top pocket for whatever. Crown it with a lid. Stitch on a thick boiled wool felt back to wick away honest sweat.

Shoulder straps are where we really went ape. Special Gerry-contoured straps made of body cradling soft

leather happily wedged to foam and felt.

And how about the way we added the optional side pockets. They're a snap to put on. And any garden variety Ph.D. can get them off... easy.

It's Gerry-built-big: 29" long, 17" average width, 9" average depth, 4267 cu. in. of cargo space... up to 40 pounds... Columbine blue cordura. Weighs but 3 lbs. 15 oz.

The Makalu Back Pack. Still think it's Gerry-built? Damn right.

Gerry Built.

Gerry / An Outdoors Sports Company

5450 North Valley Highway / Denver, Colorado 80216