Sierra Club Bulletin

June/July 1975

Wilderness and American Art
1976 Foreign Outings

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Okay. So we've gone bananas. We took our best selling sleeping bag and completely redesigned it. Went all out. Now it has everything. We're proud to say it's Gerry-built.

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Sierra Club Bulletin

JUNE/JULY 1975 / VOLUME 60 / NUMBER 6

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Cover: *"The Mount of the Holy Cross" by Thomas Moran (1837–1926), like most early paintings of the American wilderness, is a blend of realism and romance. It portrays not only what the wilderness was, but what 19th-century Americans wanted it to be. (Cover painting courtesy the Denver Public Library.)*

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."

MICHAEL MCCLOSKEY • *Executive Director*

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NORMAN MYERS

East Africa's

Whither African Wildlife?

DURING MY TRAVELS over the past few years in Europe and North America, I have gained the impression that the people there think that, of the three "Third World" continents, Africa is faring much better than the other two as regards its wildlife. By extension, these people seem to assume that African wildlife is even doing all right. Well, by comparison with parts of Asia and much of central America, that is true. By comparison with what is needed to salvage even a tolerable remnant of wildlife in Africa by the end of the century, present efforts are grotesquely inadequate.

If current trends continue, most of the great savannah spectacles of wildebeest, zebra, gazelle, impala, and the rest of the herbivores, plus their associated predators, which are the glory of Africa, could well disappear outside parks and reserves within another decade, if not by 1980. Most of the parks and reserves themselves will be fortunate to survive, as currently constituted, to 1990. By the year 2000, many if not most of the large mammal species of Africa, now frequently totaling as many as one million each, are likely to have been reduced to threatened status, if they have not been eliminated altogether.

I should stress, at the outset, that the criticisms I advance are not to be taken as a condemnation of what Africans are attempting to do with their wildlife. On the contrary, the years since 1960, by which stage most countries of Africa had attained independence, have shown an impressive record of achievement. Tanzania started on new nationhood with only

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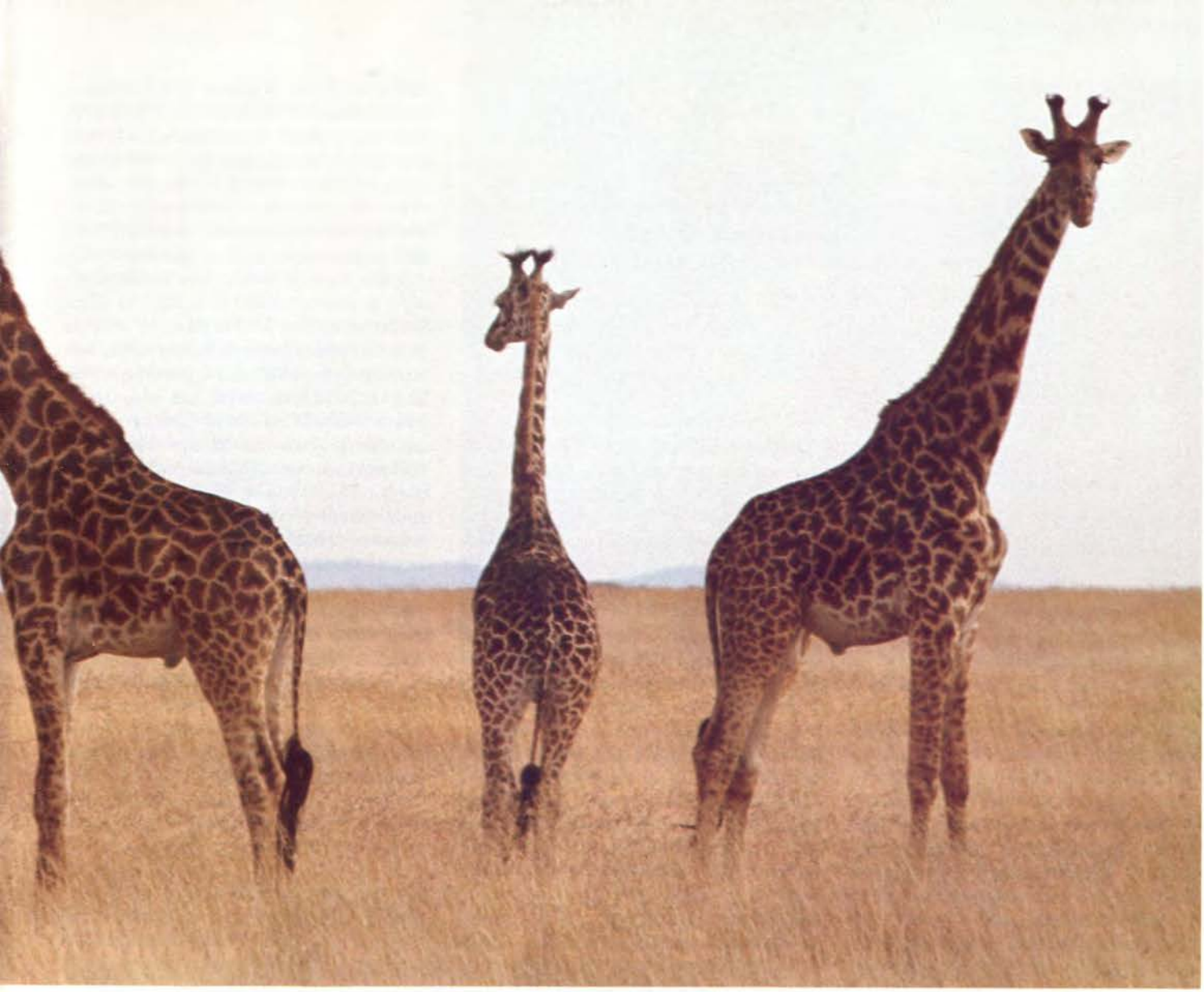


Eliot Porter

Vanishing Heritage

IAIN ALLEN

Mt. Kenya's Fading Wilderness

SHORTLY BEFORE NOON on the thirteenth of September, 1899, a pair of Swiss guides by the names of Cesar Ollier and Joseph Brocherel, together with their client, an English geographer named Mackinder, completed three hours of strenuous ice-cutting on the highest glacier of Africa's second-largest mountain. One hour later, they stood on the summit, the first men to conquer Mt. Kenya. It was the culmination of a four-month expedition that had started from the port of Marseilles, sailed to the East coast of Africa, traveled by rail to Nairobi, and had hiked from there through 120 miles of jungle forest. They were the first, and for a time the last. The country was young. Farms were struggling and towns were growing. The railway from the coast had just reached Nairobi. Engineers were trying to find a way of descending the line into the Great Rift Valley and architects strived to turn Nairobi from tin to stone. A colony was in the making. There was little time for mountain wandering.

After the First World War, Kenya's settlers began to explore the moorlands and hidden valleys below the mountain, and a few ventured onto the lower cliffs of the twin summits, Batian and Nelion. Between the towns of Meru and Embu, eighty miles apart, a Scottish mission had been established in the village of Chogoria, and a few ministers, no doubt seeking a substitute for their homeland highlands, had walked through the forests and found a world of undulating heather hills and idyllic meadows. Two laymen who developed a profound love of the mountain were E.A.T.

Iain Allen

"In the late afternoon, we reached Ernest Carr's Urumandi Hut. The place was refreshingly clean."

Dutton and Ernest Carr. Rumor has it that Carr sliced a rough track clear through the forest to the moorlands and drove his Model-T Ford over it to a height of 12,000 feet. Perhaps. What we do know is that he built the Urumandi Hut at 10,000 feet, a sturdy wooden house situated in a grassy glade just above the edge of the forest; it is still there today.

Carr left us his track and the Urumandi Hut; Dutton left us his delightful book, *Kenya Mountain* (1926), which tells how it was in the days when one could have the entire mountain to oneself, to roam across unknown moorlands and discover their valleys and gorges alone, to flee the singularly depressing atmosphere of a Nairobi summer: "I suppose that to all of us the mere idea of escaping from our humdrum surroundings is happiness itself; and in the highlands of Kenya the itch to escape is no less insistent than in England. Moreover, in February there can be no better place to get away from than Nairobi. . . . In that month, when the streets are laden with dust and the heat is unhealthy and oppressive, a journey to the sepulchered and malevolent heights of Istakar would be a charming and enjoyable excursion."

One wonders today whether Dutton would still find escape in the world of Mt. Kenya, or whether he would find it as malevolent now as the heights of Istakar. Today, there are twelve huts on the mountain, and each year thousands of visitors from overseas arrive to walk and climb on the peaks. Few of the walls and glaciers draping Batian and Nelion are unclimbed. There is little to discover high on Mt. Kenya and in the seasons of good weather there is no peace. The source of the problem is that of the seven routes of access to the peaks, Mackinder's 1899 trail is the shortest and easiest, and it is possible simply to walk to the third highest spot on the mountain, Point Lenana. The tourist can merely drive to the edge of the forest, hastily ascend the shortest valley to the peaks, and trudge to the summit—praying along the way that he will not be too altitude-sick to press his camera shutter on the 16,355-foot peak. He can then descend by the same trail to the village of Naro Moru in half a day.

The results are not difficult to imagine: increased pulmonary edema victims (there were more than twenty in 1973), and unnecessary work for the National Park Mountain Rescue Team. A trail of garbage can now be followed all the way to Top Hut at 15,700 feet. By the time the average tourist gains this height, he is deathly ill, and what happens to his waste is the last thing on his mind. The vicinity of Top Hut is a tragic mess. Fortunately, only this one trail is being marketed now by the tourist industry, and so far the other six trails are clean. Tourism is one of the mainstays of Kenya's economy, and the government is dedicated to making the lives of its visitors as comfortable and convenient as possible. This includes access to Mt. Kenya, and to that end plans are now being discussed as to the possibility of a paved road to the 10,000-foot level on the Naro Moru route. This could then be linked on the moorlands to the Timau or Sirimon routes which ascend from the west. This would be no primitive, four-wheel-drive track, but a good all-weather road capable of travel by nearly any automobile. After that, who knows? A self-service lodge has already been constructed at the head of the Naro Moru route. Why not another higher on the moorlands, carefully placed on the future link road? Why not in the valleys themselves? Why not build a cable-car téléphérique from the Teleki Valley to the mountain?

The impact of tourism is not the only problem affecting the present

"As we climbed higher we started seeing the giant groundsels and lobelia. These plants can grow as high as fifteen feet on Mt. Kenya and in some areas there are whole forests of them."

Eliot Porter

and probable future of Mt. Kenya. The country immediately surrounding the foothills is one of Kenya's richest agricultural areas. On the western side, vast farms spread over the land, and to the south and east, thousands of small native holdings checkerboard the landscape. In recent years, this agricultural empire has been steadily edging up into the forests of the mountain. The trees have been cut and burned, and the land planted with corn, beans, and other subsistence crops. As the farms creep into their forests, the animals retaliate. Elephants and buffalo trample the crops, leopards strike at goats and cattle.The game department is called in and the animals are destroyed. As the animals cease to be a threat, the farmers become more confident and push deeper into the forest. The animals again react. The game department is called, and the cycle of killing continues. Finally, on the northern side of Mt. Kenya a great lumber industry has developed. Many small African companies have formed and the search for timber has begun. They do not have to look far, and low down on the Chogoria Route one can see a wrecked and littered forest and stacks of freshly cut lumber on either side of the trail, ready for shipment.

I am a mountain guide by profession, and I have come to love Kenya as Carr and Dutton once loved it. For years I have wanted to give overseas conservationists a chance to see this mountain as it should be seen, while it can still be seen, as it might have been seen 75 years ago. To take them up a seldom-traveled trail to the summit and bring them back down to Naro Moru. A complete traverse of the mountain. An immediate comparison. An opportunity for the mountain to show someone what it really is.

I got my chance in 1973, when a Sierra Club group arrived in Kenya for a tour of the country and an ascent of Point Lenana. I told them what I wanted to do, and they agreed eagerly. I would guide our party of eighteen—eight Sierra Club members, nine porters, and myself—up the mountain from the east, following Carr's original trail from Chogoria, neglected for many years, then descend the other side to Naro Moru village. We would ascend the path of the pioneers and descend the way of the thousands. To find Mt. Kenya in its original state, we would go back to where it began.

"In the highest places sheer rock and ice cliffs grace a summit which only a technician could reach. It is an unpredictable world . . ." *Eliot Porter*

Mt. Kenya has three worlds. Each one is distinct, holds its own atmosphere and has a character which no other shares. In the highest places sheer rock and ice cliffs grace a summit which only the technician can reach. It is an unpredictable world, where the experienced find acceptance and the ignorant fear. Like a giant carpet the moorlands unfold below this relatively hostile environment. Theirs is a silent world, dented by fine valleys and rugged gorges. An everchanging land. In the warmth of the sun it welcomes, but within seconds it can be transposed into one of foreboding gloom. The walker is always a visitor; it matters little how often he goes there. Below the moorlands is a third world. The unexplored land of the leopard, buffalo and elephant. The forest.

The rain falls heaviest on the eastern forests of Mt. Kenya and here it is at its thickest. It is a great conglomeration of camphor, cedar, podocarpus and the East African olive. Within an hour of leaving Chogoria we found ourselves in its depths. Little of it is at peace. The chattering of the colobus monkey and the song of the turaco bird; the rustling of some hidden animal, or the distant trumpeting elephant and grating leopard. Few men have been here and the live things in the forest have nothing to fear. To walk more than a hundred yards from the trail, one is likely to be on ground untrodden by human feet.

Between the forest region and the alpine moorlands is the bamboo belt. Owing to the heavy rainfall, the bamboo in this area has grown to abnormal heights. Our trail was only two or three feet wide and the bamboo grew to over forty feet on either side. It is dense, impenetrable and at times parts had been smashed aside by large animals. For the most part it was like walking through a large tunnel. After leaving the bamboo, for the next two hours we hiked through an area of giant heath and our trail crossed some of the many sparkling streams which snake down from the glaciers high on the mountain. In the late afternoon we reached Ernest Carr's Urumandi Hut. The place was refreshingly clean. As darkness closed in, the temperature dropped and we made a fire.

Rising was with the dawn (most of a day's walking is done in the morning, as the afternoon is usually subjected to a thick cloud cover). Shortly after leaving the hut, we walked into an area of burnt grass and charred heather. This had been caused by native honey gatherers, and they present another problem on Mt. Kenya. They belong to a wandering tribe called the Ndorobo, who search the moorlands for bee hives and occasionally set up

artificial hives to attract the bees. When the gatherers find a hive, they set fire to banana leaves and smoke the bees out of the vicinity. Often their work ends up setting the mountain on fire. On this particular occasion they set fire to over a hundred square miles of moorland. Usually the worst burnings take place toward the end of a drought, but when the rains arrive the land is back to normal within six months.

As we climbed higher we started seeing the giant groundsels and lobelia. These plants can grow as high as fifteen feet on Mt. Kenya and in some areas there are whole forests of them. On reaching the 12,000-foot elevation we came upon one of the finest views on the mountain: the Gorges Valley, named after Captain Gorges, a colonial administrator who assisted Mackinder's expedition. The valley falls sheer on both sides for nearly two thousand feet. Far below and flowing steeply down the floor of the valley is the Nithi River, and several miles further up we could see the Nithi Falls pounding over one of the rock steps for almost three hundred feet. Much of the Gorges Valley is unexplored and it is a commanding spectacle. Our trail ascended the western ridge of the valley and for the next three hours we were able to study its grandeur in detail.

Toward the end of the day's walk, some of the party began to tire, but we were gradually gaining height and this was to be expected. We were making for Hall Tarns which is at the head of the Gorges Valley, high up on top of the western ridge, at an altitude of just over 14,000 feet. A word about Hall Tarns. It would be wrong to dismiss it simply as the gateway to the peak area of Mt. Kenya. It is the border of the higher and lower places, and the character of both. The Hall Tarns are a collection of small lakes poised on the summit of The Temple —a 1,000-foot rock buttress overhanging the waters of Lake Michaelson which shimmers far below on the floor of the Gorges Valley. The Temple is the guardian of eastern Mt. Kenya and perhaps the source of its mysteries. Surrounding Hall Tarns are the scarred rusty peaks of Delamere, Coryndon and Macmillan—challenging yet neglected. Challenging for the climbing possibilities they offer; neglected, for they are fortunate enough to stand far from the frequented trails. We camped by the side of a lake at Hall Tarns, and some slept in the small hut. We had time to see the late afternoon cloud swirling below The Temple, and finally lifting in the orange rays of a dying sun.

On the beginning of our third day on Mt. Kenya, our objective was the Top Hut, and the joining of the normal tourist route. I think some in the party were sorry to leave Hall Tarns, and many agreed that an extra day would have been worth while. The trail now led into a changing landscape. Gone were the groundsels and lobelias, and in their place stood the stark lichen-covered rocks and boulders. Glacier-scoured cliffs loomed above us and fractured screes lay ahead. Our trail contoured the worst of the screes but the combination of scree and 15,000 feet does not lead to easy hiking. We were half an hour's walk from Top Hut when we joined the trail which leads round the upper peak area of Mt. Kenya. A few hundred feet below us lay the broken remains of three horses—a grim reminder of who suffers at altitude when the walker has no intention of walking. We reached Top Hut at noon.

Our journey was nearly over. For three days we had walked over a fine, almost unknown country, covering a distance of more than 30 miles. We were now 15,700 feet above sea level, situated on the eastern side of the Lewis Glacier, almost astride the equator. A short distance above us stood Point Lenana at the highest part of the Lewis Glacier, and across the screes and snow, the walls of Nelion and Batian rose vertically for 2,000 feet.

In the afternoon we traversed the glacier and scrambled to the summit of Point Melhuish. This 16,000-foot peak stands directly below the twin summits of Batian and Nelion, and the views are spectacular. We could see the plains of Naro Moru and the sun glinting on the Kikuyu huts far below. In the distance the Aberdare mountain range reminded us of just how high we were. A cold night was spent in Top Hut, and in the early morning we climbed up the frozen ice ridge to the summit of Point Lenana. On the southern horizon the snow dome of Kilimanjaro could be seen more than two hundred miles away.

It was time to go. Slowly, and I think reluctantly, our party descended the southwestern side of the mountain and dropped into the Teleki Valley, over the well-worn tourist trail, past the strings of garbage and cans and detritus. I had shown them the mountain I loved, and now they were seeing what too much love—or at least curiosity—could bring to a high, wild place like Kenya. We passed many groups of walkers who were ascending from this side, gasping, tired, discouraged. We attempted to answer their questions—how far is it now to the head of the valley, how difficult is the final stage to the top of Lenana? Not far, we said, but the last stage is but a small part of the whole journey. Our answer was met with looks of dismay. Remembering what we had seen in our three days and realizing how little they were seeing in their difficult two, we could almost laugh at them. Almost. ●

"We camped by the side of a lake at Hall Tarns."

Iain Allen

one national park. Now it has nine, with others on the drawing board. Tanzania spends a greater share of its national budget—approximately as much as Los Angeles spends on ice-cream each year—on safeguarding its wildlife than does the U.S.A. on its bison, Yosemite, and other wildland spectacles. To be sure, Tanzania has more wildlife left to protect; but Tanzania ranks among the dozen most impoverished nations on earth.

Zambia similarly started independence with only a handful of protected areas, but now one-third of the country—90,000 square miles, or an area almost the size of Oregon—has received conservation status. Zaire has come through 15 years of tumult with ideals intact enough to have classified already five percent of its territory as national parks, and seeks to reach 13 percent within a few years. The great parks of eastern and southern Africa —Serengeti, Amboseli, Tsavo, Luangwa Valley, Kafue, Wankie, Kruger, Kalahari Gemsbok, Etosha, Gorongoza, total almost 200,000 square miles, an area greater than California. Moreover, a mere handful of species and subspecies have become extinct in Africa during recorded times, and fewer are listed as endangered than in any other continent.

The track record to date is impressive by virtually any criterion. The point is, will these strategies work so successfully in the future?

The future will be a different scene, that's for sure. The growth rate of the human population in the countries with greatest wildlife spectacles is around 3.5 percent, the highest average in the world for an extended region. More significant still, the age distribution—more than 50 percent in the category 15 years old or less—means that this "young population," to use the demographic term, will keep on expanding for many decades to come: the parents of the future have already been born. To date, the average family size totals between six and seven children and, as nutritional levels rise in the segment of females at reproductive age, the number of children per family is *going up* (pioneer America, when going through its phase as a developing country, averaged seven children per family—though with a far lower survival rate than contemporary Africa).

Kenya, for instance, the first country of black Africa to institute family planning as an official program in 1967 (it took guts to do that), had a fertility rate at that time of 6.7 children; by now it is around 7.4, and is expected to go above 8 before it can be turned downward. The Population Council from New York came to Kenya a few years back at the invitation of the Kenya government, and concluded that if financial resources for birth control were to be increased ten times, there would be a time lag of ten years before the population growth rate could be turned around. Even were black-Africa countries to do overnight what it has taken North America and Europe over one century to achieve—viz., reduce family size to replacement rates—the populace would increase between two and three times before it approaches zero population growth.

But, some would say, Africa is still the last great empty continent. Well, not any more it ain't. Those people who divide Africa's population total of 355 million into the amount of land should try to live off subsistence crops in Nevada. Only ten percent of Africa is now suitable for cultivation, due largely to poor rainfall. The arable areas are already full to capacity. The wildlife addict who flies into Nairobi and then dashes off to the distant game parks should take a trip ten miles north into Kikuyuland. There he would see people trying to make a living off the land at densities of 1,600 to a square mile, or half as much land as the peasant in comparatively spacious India enjoys.

A similar situation obtains for the Buganda, the Luo, and other tribes around Lake Victoria in Uganda and Tanzania, as well as in Kenya. On the slopes of Kilimanjaro, the Chagga

Norman Myers

During migration, a wildebeest herd may darken the plains for miles.

Wildebeest at the watering hole

Norman Myers

Elephants and cattle egrets

likewise try to scratch a living through horticulture rather than agriculture, at densities comparable to rural Holland and Japan. They would not pack in so tightly if there were suitable areas elsewhere. One marginally appropriate place to which excess people migrate is the big city. The safarist to Nairobi could obtain an even more vivid impression of the population-resources-environment crunch in Kenya if he came back to Nairobi from Kikuyuland via the city suburbs where, in one locality, he would see a single-story shantytown of people as crowded as 1,000 to an acre (how do they all find space to sleep at once?).

When people are reduced to living in conditions of this sort, they readily try out any opportunity for land availability, however marginal. A significant consequence is the over-spill from fertile areas into the biotopes which seem to offer a prospect for human settlement, viz., the savannah zones. If a farming community wishes to colonize new territory, the people are little inclined to head for thorn bush or scrub country or tsetse-ridden woodlands; rather they head for the grasslands. If these grasslands are the haunt of enormous throngs of plains game, as in Masailand of southern Kenya and northern Tanzania, then too bad. If some of those herbivore herds form part of wildlife communities which are centered on, but by no means confined to, protected areas such as Serengeti, Tarangire, and Nairobi Parks, then hard luck on the people who alone seem to derive benefit from the protected areas; i.e., the affluent foreigner. If it should be a white foreigner, the African can hardly be blamed if his thinking becomes colored (so to speak).

A measure of things to come is to be noted in parts of eastern Kenya where the human population has reputedly been increasing at rates between 10 and 35 percent per year. One consequence of this migratory surge has been to increase pressure on Tsavo Park's hinterlands, the 9,000 square miles of support zone that contain some of the elephant populations located in and around the 8,000-square-mile park: more elephants seek sanctuary in the park, more vegetation is over-used, more carcasses make the next mini-drought seem a catastrophe, and so forth.

Not that this over-spill from the arable areas would necessarily mean that all of, say, Kenya would be overrun. Cultivation is generally a poor bet where the rainfall average is less than 30 inches per year. That has meant that hitherto at least four-fifths of Kenya has been safe from the digging hoe. But desperate people are now ready to try their luck in areas with as little as 20 inches of rainfall —which means in the grasslands with their exceptional wildlife congregations.

Those parks and reserves which are located in arid territories with rainfall below 20 inches per year seemed until recently to be secure. But the last few years have seen the development of drought-resistant strains of maize, genetic variations able to reach maturity with only 5 to 7 inches of rain per season. This means that the great proportion of wildlife country in Kenya is now available for cultivation and colonization.

The process will be slow at first (and thus—to repeat the point— permit scope for adaptation of conservation strategies). But Kenya's rural population of 13 million people is already exerting unsupportable pressures on the major wildlife ecosystems. By the end of the century, even with extensive family-planning campaigns and with intensified agriculture through green revolutions, there will be at least another 13 million people with no land in their ancestral reserves and with no employment prospects in the urban conglomerations that will then pass for cities. Therefore, these people will look for any patch of country on which to plant subsistence crops—woe to wildlife if

Grant's zebra

Elephants

Thompson's gazelle

Cheetah

that is wildebeest, or zebra, or gazelle habitat. Kenya's experience is paralleled by similar situations in Zambia, Ethiopia, Mozambique, Angola, and Tanzania. Rhodesia, South Africa, and Namibia are already developed to the point where wildlife is reduced to token communities in isolated parks and reserves.

The Cheetah's Plight

The cheetah sums up many of these pressures. Africa now totals less than 25,000 cheetah, possibly fewer than 10,000. Whatever the true figure may be, a more significant calculation is that the total is almost certainly only half what it was in 1960; and, unless current trends are changed, present numbers will drop to half today's total within another ten years, perhaps by 1980. This is because the cheetah, largely confined to savannah grasslands, encounters progressive disruption of its life-support systems from newly established cultivator communities. Where the cheetah can still find uncultivated grasslands, it encounters another, equally bad threat.

Stockmen in Africa, whether established ranchers such as those in Kenya, Zambia, and southern Africa, or subsistence pastoralists trying to undertake commercial practices, such as the Masai of East Africa and the Herero of Namibia, or the drought-stricken Tuareg nomads of the Sahara fringe, do not wish to hear of wild predators any longer. Nor do they wish to hear of wild herbivores, for that matter. Every stockman now has increasing incentive to make sure the grass goes down the throats of his domestic herds, not into gazelles and other wild herbivores which form the cheetah's main prey.

When natural prey runs short, the cheetah turns to sheep and calves and goats. This occurs at a time when the stockman is trying to make his operations both more extensive and intensive for a variety of reasons, among which a principal factor is the need to relieve the world beef famine. In a time of narrowing profit margins, the rancher eliminates every source of loss. Whereas in the past he had been prepared to remain ignorant, or at any rate to ignore, such occasional losses as could be blamed on wild predators, he now keeps an eye on what happens to every last animal in his holdings. Of the predators responsible—lions, leopards, hyenas, wild dogs and cheetah—the cheetah accounts for fewest instances (except possibly the wild dog). But, because the cheetah hunts during the day, and by an extended chase rather than ambush at close quarters, it draws attention to itself and is thus easier to dispatch.

New Conservation Strategies

What is to be done about this situation, for parks and declining species alike? A range of options is available, partly to shore up existing measures and partly to explore new opportunities. The policy of outright protection for parks has served well enough to date. But, given the pressures which are to be increasingly exerted on these large tracts of land locked away for apparently "useless" purposes (at least as the African perceives the situation, and he is the man whose perception counts), they may not survive the incoming tide unless they can better accord with the legitimate needs of emergent Africa.

It would be deplorable, of course, were the great parks to disappear. But when a man and his family starve for want of a cash-income equivalent to what a can't-make-ends-meet American spends on martinis each year, there is little doubt which party's survival prospects are poor and which are worse.

If wildlife lands just outside the boundaries of established preserves were given over to sustained-yield exploitation of the wildlife resource, the

Cheetahs are now regarded as dangerous pests by native stockmen.

Photos by Norman Myers

parks themselves might mean more, in terms of aspirations for Africa, not only to the American preservationist but also the African peasant. The Serengeti migration, for example, could produce perhaps 40 million tins of canned meat each year without any decline in total wildebeest, zebra and gazelle numbers below the present two million. *There would be no need for any cropping to take place inside the park boundaries.* There need be no undue disturbance to the herds that make up the tourist attraction. But this initiative would depend primarily upon shifting public opinion, which, in councils outside Africa, tends to insist that African wildlife should not be tainted with commercial considerations.

A major United Nations game-cropping experiment in Kenya, with potential for safeguarding park populations, has just been brought to a halt, in part as a response to anti-exploitation opinion outside Africa. The same occurred a few years back in the Luangwa Valley in Zambia, with its huge, if not excessive numbers of elephant, hippos and buffalo—all animals which produce a pile of high-quality protein for a single bullet. In Kenya's Tsavo Park in the last few years, at least 7,000 elephants have died of starvation, meaning 15 to 20 thousand pounds of meat left to the vultures, at a time when one quarter of a million people in Kenya received famine relief food (much of it by courtesy of the generous folk in the United States).

A further conservation strategy could lie in exploitation of animals far away from protected areas. The image of predators in general could be enhanced to the extent that ranchers are less likely to exterminate cheetah, lions, and the rest, if the leopard were allowed to sell its skin on the open market. A two-year survey which I conducted on behalf of the International Union for the Conservation of Nature and the World Wildlife Fund reveals that Africa contains at least 100,000 leopard, perhaps many more. An off-take of 10,000 skins per year could be easily sustained by this total.

If the trade were *strictly* regulated, and the profits more equitably distributed, the African stockman would derive benefit from the creature which he at present looks upon with the same spirit as the American rancher views the coyote and the cougar. A sufficiently controlled trade might be difficult to organize, but human ingenuity has managed to surmount the difficulties with diamonds, so why not spotted furs? An initiative along these lines would, of course, mean a basic adjustment in conservationist attitudes in North America and Europe, where the cry for the past ten years has been that all spotted cats are being driven to the brink by the international fur trade. That argument still holds good for pretty well all spotted cats except the leopard in Africa. Can would-be protectors of African wildlife prove sufficiently adaptable in their attitudes to support rather than resist such radical reorientation of strategy?

A similar situation afflicts the zebra. Competing as it does for rangeland with domestic livestock, the zebra is being steadily squeezed out of its habitat—unless it can prove itself as efficient in the marketplace as cattle. The zebra is quite capable of proving a match, since its meat covers the cost of cropping operations, and an average skin sells in Abercrombie and Fitch for $300. But preservationist sentiment has barred the market to zebra skins in the states of California and New York, the two largest markets on earth for this product.

Common Heritage of Mankind

A further innovation could lie in the "common property resource" concept. If African wildlife is reckoned to be an asset not only of Africa but of mankind in general, both now and in the future, what can mankind do about its protection? Supposing the wildlife congregations at stake could be designated as a resource in which society at large has a legitimate interest, the way could be open for society to show how much financial clout goes with its conservationist convictions. In other words, the world community would somehow have to channel a cash subvention to the African countries in question year by year, in order to compensate their citizens for the "opportunity costs" they experience in not putting the wildlands to "more appropriate" purposes. This would constitute a quantum leap in international relations. In scores of senses it would run counter to the prevailing spirit of international relations, where interdependency is a fact which few people wish to face up to.

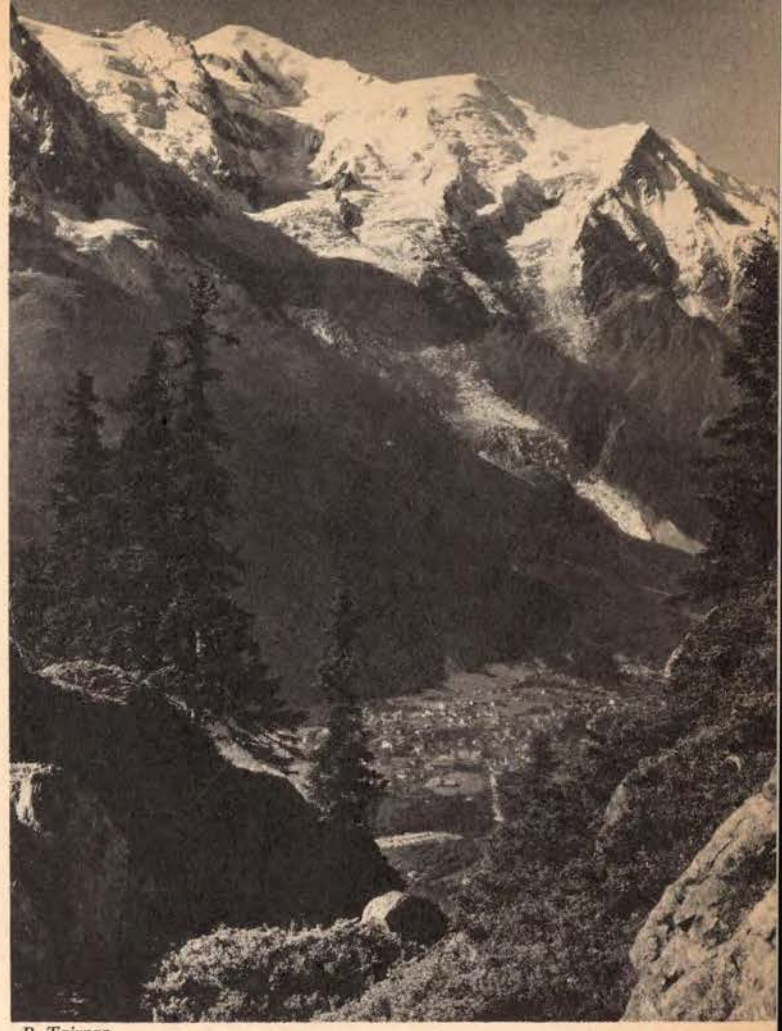
Society has had little experience in looking after society's property. Most societal institutions, whether economic, legal, cultural or political, are geared to the idea of private property rather than common property. An initiative of the type suggested here would mean a departure from the pattern of affairs since man first gathered into sizable communities 5,000 years ago. But perhaps the alternatives make a giant stride of this sort a little easier to contemplate.

Despite the still-rising interest in Africa's wildlife, present efforts at protection have less and less effect on the ground. Furthermore, perhaps the idea of cash assistance could be more readily stomached if Americans were to consider that they should not make the gesture out of charity. Rather they should seek to compensate for "externality effects," such as cheetah killing, in the beef-producing grasslands of Africa. The environmentally inclined citizen of North America is not only a conservationist, he is likewise a consummate consumer, with the consequence that what he achieves for wildlife with his right hand is often undermined by his half-dozen left hands. We are all in the same boat; so whose end is sinking? •

Norman Myers is a distinguished authority on African wildlife. Author of The Long African Day, *he now serves as Regional Wildlife Officer for Africa under the United Nations Food and Agricultural Organization, based in Accra, Ghana. He has been a consultant to several international scientific and environmental organizations. The opinions expressed in this article are those of Dr. Myers and do not necessarily represent the position of the Sierra Club or its individual members. We will continue to present articles that reflect the views of important spokesmen in the environmental community on issues of special interest to our readership. We welcome your response.*

1976 FOREIGN OUTINGS

Formerly remote and inaccessible areas of the world have now been brought within the reach of almost anyone with a few weeks vacation and a thousand dollars or so. Again in 1976, the Sierra Club will offer more than a thousand members, sub-teens to seventies, never to be forgotten visits to those faraway places . . . journeys to Greenland's icy shore, to warm Mexican beaches, to the islands of the sea and to the reefs thereunder, to Africa, to Asia and to Europe. Read on, and start to dream.



P. Tairraz

(425) Tasmania and New Zealand—January 1-March 6. Leader, Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611.

Two base camps will be established in Tasmania. For one week we will camp at a beach on the western coast, a wilderness untouched by man. For another we will base at Mt. Field Park to visit its high plateaus. In two weeks spent in New Zealand we will visit Roturua, and travel for seven days through the forests of Urewera Park on a packhorse trip. One week will be spent in a ski chalet at Tongariro Park in which we will hike and climb. The trip will require a moderate ability for knapsacking with personal equipment in some parts of the trip. Cost is approx. $1500 plus air fare for the five weeks.

(410) Galapagos Islands, Ecuador, January 28-February 18. Leader, H. Stewart Kimball, 19 Owl Hill Rd., Orinda, CA 94563.

The Galapagos are one of nature's wonderlands each outdoor lover should visit at least once. We shall have unusual opportunity of intimate approach to these wonders by sailing in 2 small vessels equipped with auxiliary engines, accommodating 10 and 6 passengers each, operated by Julian Fitter, experienced sailor and guide. Because of the size of the vessels we will be able to visit islands not available to larger groups. This is the warm season, the islands will be green and tropical, and the swimming and snorkeling will be excellent. The group meets in Miami, flies to Quito, and takes the autocarril to Guayaquil, a fantastic ride through the life zones from subalpine to tropical. Land cost is approx. $1200 plus air fare.

(415) Kenya Saddle and Game Viewing Trip—January 29-February 21. Optional Blue Nile River Run, Ethiopia—February 18-29. Leader, Tony Church, Nairobi; coordinator, Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611.

Ten days of horseback riding from Nairobi to Lake Naivasha and Samburu Game Refuge will allow a close study of wild game and a peaceful contemplation of the Rift Valley. Experience in riding is of advantage but not necessary. One week of game viewing by Landrover is included. Cost approximately $1475 plus air fare. Optional river run in Ethiopia is unique experience, at extra cost.

(430) Trisuli-Gatlang Valleys, Nepal—March. Leader, Tris Coffin, 500 Tamalpais Ave., Mill Valley, CA 94941.

This springtime trek includes the most fascinating biotic areas in central Nepal, from a visit to the jungle Terai on the Indian border to the great hemlock and rhododendron forests of the inner Himalaya. We cross a 12,000-foot pass dropping into the upper Mailung drainage near a glacier at the foot of one of the Himalayan giants. We will complete our circle trip to Trisuli Bazaar via the western ridge of the Mailung River. Travel by elephant, Landrover, air and foot will include a trade route to Tibet and the seldom-visited Gatlang Valley. Cost is approximately $1300 plus air fare.

(435) Gurkha Himal, Nepal—April (3 weeks). Leader, Bob Stout, 10 Barker Ave., Fairfax, CA 94930.

Spring in Nepal offers remarkable contrasts, with the snowy Himalayan peaks and rhododendrons in full bloom coinciding with the annual bird migration of over 200 species. This 18-day trek will visit the home of the 18th-century warriors who conquered Kathmandu Valley and formed the present Nepalese culture. We will be accompanied by a naturalist who will assist in identification of plants and wildlife. We will also have time for sightseeing trips in the Kathmandu Valley, Bhodnath, Patan, Swayambodnath. This is a moderate trek with a maximum elevation of 15,000 feet. Cost is approximately $1300 plus air fare.

(438) A Spring Outing to Japan—April 17-May 15. Leader, Claude A. Look, 411 Los Ninos Way, Los Altos, CA 94022.

"Sakura No Hana"—cherry blossom time spreads northward

Wayne R. Woodruff

as we travel with the blooms to areas seldom seen by tourists. Ryokans, public transportation and people blend with our way of Japanese living. Activities for hikers and non-hikers as well as views of Mt. Fuji and Kyoto. Cost is approximately $1100 plus air fare.

(439) Spain: Central Pyrenees—Late May-June. Leaders, Aurora Dorado of Spain and Lewis Clark, 1349 Bay St., Alameda, CA 94501.

Two to three weeks of moderate trail hiking in the scenic central Pyrenees with a swing into France through picturesque Gavarnie south of Lourdes. Hike over 9,000-foot passes near massive Mont Perdido and maybe climb Pico Aneto (highest of the range). Walk through rugged cirques, bucolic valleys, around lakes of the Maladeta, visit historic monasteries, explore wild areas off the beaten track, stay in mountain refugios, albergos, a parador. Ride in charter vehicles between base points. Estimated cost from Barcelona, $770.

(447) Walking in Norway—July 7-23. Guide, Arnold Stenersen from Norway; Leader, Betty Osborn, 515 Shasta Way, Mill Valley, CA 94941.

A delightful combination of a high mountain trek in Norway's Rondane Mountains, partly through a national park; and boat travel and walks through the best of the famous fjord country along the West Coast. Our transportation will include train, bus, ferry boat, and motor boat. There is daylight around the clock at this time of year with extensive glaciers and sparkling waterfalls at their best. Moderate to easy hiking for experienced walkers. Estimated cost, $525 plus air fare.

(455) South American Parks—July (4 weeks). Leader, Howard Mitchell, 65 Hillside Ave., San Anselmo, CA 94960.

On the Pacific Coast of Colombia are some nearly untouched jungles of South America. There will be a 10-day dugout canoe trip along the trailless Choco coast with camping in bays and an excursion up river to visit the Bora Bora Indians. Look for orchids and jungle birds in an area proposed for a Colombian Park. In the Parque Nacional Huascaran of Peru we shall hike and camp for two weeks below the snowcapped Andes about 12,000 feet elevation. Four weeks ground cost $1150 estimated plus air fare.

(445) Northern Frontier District, Kenya—July 1-28. Leader, Tony Church, Nairobi; coordinator, Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611.

Starting from Nairobi in Landrovers, tented base camps will be established at the Mara River in Masai Mara, by a lake at Maralal, on top of Mt. Marsabit by the shores of Lake Paradise, and at the Nyuru River in the Samburu Game Refuge, alternated by occasional stays in lodges while traveling between camps. The trip offers a great variety of game viewing, scenery, and native people. Cost about $1450 plus air fare.

(448) Austrian and Swiss Alps—July 17-Aug. 3. Leaders, Brad Hogue, 3750 Long Ave., Beaumont, TX 77706 and Wayne R. Woodruff, P.O. Box 614, Livermore, CA 94550.

Wandern the trails of the Austrian and Swiss Alps through valleys and over high passes skirting the glaciers which inch down from the ridges on the Italian border. Days of moderate hiking lead to Alpine Club or mountain huts where food, lodging and good company await. We will spend about a week in Austria's Stubai Valley and a week in Switzerland, traveling between by train or postbus. Leader approval is required; minimum age is 11. Approximate cost $500 plus air fare.

(460) Indonesia: Java, Bali, Sulawesi—July-August (five weeks). Leader, Ray Simpson, 2907 Pine St., Berkeley, CA 94705.

An in-depth view of the culture and ecology of this exotic land, led by a former resident. The itinerary includes the nature preserve of Udjung Kulon (home of the one-horned rhino); snorkeling among pristine coral gardens; a visit to Jogjakarta, the cultural and art center of Java; an optional climb of the famed volcano, Gunung Bromo; the "Spice Island" of Sulawesi; and a final week of emersion into the fabulous life of Bali . . . unique dances, colorful temple ceremonies of a gentle and friendly people. Cost will be approximately $1000 (land portion) and $1300 air fare.

(475) Hiking and Canoeing in Sweden and Swedish Lapland—July 22-August 12. Leaders, Mary and Ross Miles, 18 Farm Rd., Los Altos, CA 94022.

This trip combines canoeing in the Varmland District of Sweden with hiking above the Arctic Circle in Lapland. For 8 days we paddle through a lovely chain of lakes. An overnight train carries us to Kiruna where we start our 8 days of hiking. We spend 1 or 2 days at Kebnekaise. While hiking the Kungsleden we stay in mountain huts and lodges along the way. Our trail takes us through the birch forests of Abisko National Park, Europe's last wilderness area. Cost is approximately $745 plus air fare.

(480) Greenland—early August (16 days). Leader, Jim Watters, 600 Caldwell Road, Oakland, CA 94611.

A first for the club, this novel trip visits Greenland's southern tip, where the eternal ice-sheet has retreated as far as fifty miles from the sea to unfold a wild, breathtaking land of granite-walled fjords and grey-green mountainscape. The summer sun exposes uncounted lakes and tarns. The trip starts at Narssarssuaq on Erik's Fjord, scouting among the old Norse ruins in the district. We will then walk a glacier, and backpack through highland valleys to Julianehab, a trek of about six days. A leisurely boat trip follows, connecting Igaliko Fjord with Skovfjord (Erik's). Cost approximately $450 plus air fare.

(450) Galapagos Islands, Ecuador—August 9-September 2. Leaders, Betty Osborn, 515 Shasta Way, Mill Valley, CA 94941, & Salem Rice.

For 22 days by sailing vessel and on land we will explore these starkly beautiful islands, walking among fierce looking marine and land iguanas and great tortoises, visiting bird colonies unique to each island, and watching sea lions at play in tidal pools. Wonderful swimming and nature photography. Excursions and overnight hikes will visit volcanoes, rain forests and the Darwin Research Station. Estimated land cost, $1200 plus air fare.

Beverly F. Steveson

(483) Walking in Wales—August/September. Leaders, Lori and Chris Loosley, c/o IBM (UK) Ltd., Addiscombe Rd., Croydon, U.K.

Two weeks of hiking in the mountainous and ruggedly beautiful National Parks of Wales. From the bleak hills of the Brecon Beacons to the coastal grandeur of Pembrokeshire and finally to Snowdonia, a green and misty mountain range of a thousand moods. We shall stay at farmhouses and meet the Welsh—musical, poetic people who are proud of their own language and culture and who have always resisted the physical and cultural invasions of the English. Price approximately $500 plus air fare.

(485) The Netherlands Afoot and Afloat—September (3 weeks). Leaders, Ellis and Margaret Rother, 903 Sunset Dr., San Carlos, CA 94070.

We shall leave the big cities to the tourists, exploring the great delta waterways; sanctuaries for bird and animal life on and around the islands along the northern shores of Holland, visiting small villages, traveling for miles through meadows, on and along canals, following the eastern shore of the Zeider Zee to campsites in the wooded hills of Arnheim, site of the greatest airborne battle of all time. Thence to Breda near the Belgian border. Our purpose: to examine and assess the development, the people, the natural resources, open space animal life, and plant life. Cost approximately $750 plus air fare.

(510) Kenya Mountains to the Sea—September 30-October 22. Optional Seychelles Islands or Omo River Run, Ethiopia—October 21-30. Leader, Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611.

From a base camp at Masai Mara the itinerary will take us via Mt. Kenya and Meru National Park to the coastal area at Lamu, an ancient Arab town on an island in the Indian Ocean. From there we will traverse Tsavo National Park to our camp at Amboseli near Mt. Kilimanjaro. Game drives and hikes, several days of boating on the Tana River, and beach combing will furnish a variety of experiences with little or no difficulty. Cost approximately $1500 plus air fare. The optional trips are described in supplement.

(515) Ganesh Himal-Gurkha Himal, Nepal—October (25 days). Leader, Edith Reeves, 1739 E. San Miguel, Phoenix, AZ 85010.

Twenty-five days of trekking, perhaps with a naturalist to visit the home of the 18th-centuryGurkha warriors who conquered Kathmandu Valley and formed the present Nepalese culture. The first part of the trek is all Tamongs, the second all Gurungs; both tribes have maintained identity with unique dress and customs. The maximum elevation is 15,000 feet, a moderate trek. Cost is approximately $1375 plus air fare.

(520) Annapurna Circle, Nepal—November. Leader, John Edginton, 2733 Buena Vista Way, Berkeley, CA 94708.

To circle the massifs of Annapurna, Lamjung and Ganesh Himals is the goal of this relatively strenuous 25-day trek promising unparalleled views of these great peaks. We cross Thong La at 17,000 feet to return by the great river gorge of the Kali Gandaki far below and between the towering peaks of the Annapurna and Dhaulagiri Himals. Should snow block the high passes, we will explore beautiful Marsyandi Valley returning down that valley. Cost is approximately $1375 plus air fare.

(525) Natural History Trek through Kathmandu Valley, Nepal—late November-early December. Naturalist, Dr. Robert L. Fleming, Sr., Kathmandu; coordinator, Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611.

Fifty miles long Kathmandu Valley (4500 feet) is surrounded by mountains about 10,000 feet, offering splendid views of the entire Nepal Himalayas. Rain forests are rich in plant life, and bird life is especially varied at this time of year. A two-weeks' trek will furnish a cross section of the natural history and the cultures of the local inhabitants. A two-day trip to Tiger Tops in the Terai is included. Approximate cost $1000 plus air fare for a three weeks' outing.

Wayne R. Woodruff

Mexican/Guatemalan Boat Trips

(406) River of Ruins Raft Trip, Rio Usumacinta, Guatemala and Mexico—March 4-16. Leader, Frank Hoover, 900 Veteran Ave., Los Angeles, CA 90024.

This tropical jungle trip starts at Tikal and ends at Palenque. During the raft portion of the trip we will visit other ruins, Yaxchilan, Piedras Negras and some minor sites reachable only by raft. We will visit settlements along the river and have opportunities to view wildlife including monkeys, numerous birds and other exotic creatures. Members will run the boats. For active, experienced campers; minimum age 12. Cost will be approximately $650 plus air fare.

(407) Sea of Cortez Leisure Boat Trip—April 3-10. Leader, Rouen Faith, 6122 Montgomery Ct., San Jose, CA 95135.
(408) April 10-17. Monroe Agee, 13750 Rivulet Rd., San Jose, CA 95124.

Our 1975 trip was so successful, we are making two trips in 1976. The cruise is an adventure in sea life, designed to meet the requirements of both the physically active and lazier ones. The first trip will go from La Paz to San Felipe and the second trip will return to La Paz. This is a coastal trip along the east coast of Baja California. Along the way we will visit exotic islands and observe the abundant sea life of whales, dolphins, sea lions, frigate birds, boobies and pelicans as they go about their undisturbed way. Approx. cost $545 round trip from San Diego includes air fare to La Paz.

Kent Schellenger

Foreign Underwater

(418) Grand Cayman, British West Indies—January 4-13. Leader, Kent Schellenger, 248 C Calle Marguerita, Los Gatos, CA 95030.

Reef exploration is the theme of this trip to a favorite dive site, an hour from Miami. (The winter weather is beautiful!) The shallow reef just offshore is alive with coral, sponge, and fish. Deeper reefs accessible by boat offer spectacular underwater vistas. The leader and resort staff will help with scuba and photo skills and marine life identification. Evening films will add to appreciation of the reef. Cost, about $760, covers all but air fare; $540 for non-divers.

(419) Galapagos Islands, Ecuador—May 6-29. Leader, Ann Gladwin, 526 Pine Wood Ct., Los Gatos, CA 95030.

Daily land excursions across lava flows, encounters with fearless birds, iguanas, and giant tortoises, are complemented by scuba diving. Rarely seen even by scientists, Galapagos underwater offers tropical fish co-existing with sea lions, penguins and turtles, and endemic species like the diving marine iguana. We live and sail on the 63-foot ketch *Sulidae*. Leader is a YMCA scuba instructor who has dived the Galapagos. For certified, experienced divers. About $1850 excluding air fare; $1550 for accompanying non-divers.

(420) Grand Cayman, British West Indies: Tropical Reef Biology—June 4-15. Leader-Instructor, Steve Webster, Box 293, La Honda, CA 94020.

A college-level course, for casual or credit participation, is offered by the leader, a NAUI Instructor and professor of marine biology. The course covers biology, natural history, ecology, and identification of marine organisms. Open to certified divers (and accompanying non-divers at lower rates). Cost of about $760 covers everything except air fare.

(421) Grand Cayman, British West Indies, Tropical Reef Biology (Intermediate)—June 16-27. Leader, Steve Webster, Box 293, La Honda, CA 94020.

Open to all certified divers, this trip is especially for alumni of previous biology trips or those with some background. It includes instruction in marine biology and participation in research projects. Daily diving will consist of research dives with particular objectives. Exact nature of the project(s) will be determined by background and interests of participants. Cost of about $760 (less for participants of trip 420) covers all but air fare.

(422) Belize Barrier Reef—June 19-July 2. Leader, Kent Schellenger, 248 C Calle Marguerita, Los Gatos, CA 95030.

British Honduras and a reef second only to Australia's is the site of this new trip. It offers simple, attractive accommodations, unlimited snorkeling and diving in rich and colorful waters. A basic scuba course for novices and daily boat diving for certified divers are planned, but snorkelers will be busy, too. After the trip, tours can be made to Mayan ruins in Belize or Guatemala. Belize is an hour from Miami, New Orleans, and Mexico City. Cost of about $700 covers all but air fare.

(423) Fiji and Tonga—July 7-27. Leader, Ann Gladwin, 526 Pine Wood Ct., Los Gatos, CA 95030.

On Fiji, divers will stay in Suva and Lautoka, with daily excursions to the outer islands. Highlight of the Fiji stay will be an overnight boat trip to Astrolabe, an island with "the best diving in Fiji." On Tonga, the pace will be leisurely. At present there are no scuba facilities, but fine snorekling, interesting sight-seeing and shopping. Plans are still in progress but may include days in Western Samoa. About $1950 includes air fare from San Francisco.

IT'S NOT TOO LATE FOR A WILDERNESS TRIP IN 1975

More than 85% of all places on our 1975 Wilderness outings have already been spoken for, and quite a few trips are completely filled with a waiting list. But hundreds of places are still unfilled on other outings. If you start right now, you may be able to get a reservation for yourself or for your family. Each of the following trips had several vacancies available at press time.

Trip Number		*Date*	*Trip Cost (Incl. Deposit)*	*Deposit*	*Leader*
	ALASKA				
10	Admiralty Island Canoe Trip	July 13–20	320	50	Sandy Sagalkin
	BASE CAMP				
32	Lost Lake Alpine Camp, Sequoia Park, Sierra	July 6–18	185	25	Bob Miller
34	Agate Springs, Rocky Mtn. Camp, Absarokas, MT	July 13–25	215	25	John Freiermuth
40	Lost Lake Alpine Camp, Sequoia Park, Sierra	July 20–Aug. 1	185	25	Steve Devoto
48	Palisades Mountaineering Camp, Inyo Forest, Sierra	Aug. 9–16	140	25	Sy Ossofsky
50	Chittenden Lake, Sierra Forest, Sierra	Aug. 3–15	200**	25	Joanne Barnes
51	Badger Lakes, Inyo Forest, Sierra	Aug. 3–15	200	25	Jerry Fritzke
53	Death Valley Christmas Camp, California	Dec. 21–30	160	25	Ray Des Camp
	**Children under 12 $175.				
	BICYCLE				
58	Island of Hawaii	July 31–Aug. 18	570	25*	Paul DeWitt
	*Per person deposit; includes Hawaii round-trip air fare.				
	BURRO				
60	Chain Lakes, Yosemite Park, Sierra	July 2–9	125	25	Jack McClure
61	North Fork of the San Joaquin River, Sierra	July 9–16	125	25	Don White
64	Hawksbeak Peak, Toiyabe Forest, Sierra	Aug. 10–17	125	25	Doug Parr
65	Suicide Ridge, Yosemite Park, Sierra	Aug. 18–25	125	25	Brett White

Trip Number	Date	Trip Cost (Incl. Deposit)	Deposit	Leader
	FAMILY TRIPS (Other trips with family rates are listed under Base Camps.)			
	Family Canoe	*Parents and one child* / *Each addl. child*		
95	Adirondack Lakes Teen-Age Trip, New York	July 27–Aug. 2	335 & 115	25	Lyle Seeger
	FOREIGN 1975* (Total cost is approximate and does not include air fare.)			
621	Kenya: Northern Frontier, East Africa	July 20–Aug. 16	1470	50	Ross Miles
017	Walking the Mathews Range, Kenya, East Africa	Sept. 7–30	1500	50	Al Schmitz
635	Annapurna Circle Trek, Nepal	Sept. 27–Oct. 30	1300	50	Tris Coffin
647	Angel Falls, Venezuela	Nov. 8–23	1450**	50	Ted Snyder
033	Tassili N'Ajjer Camel Caravan, Algeria, Sahara	Nov. 13–Dec. 1	1325	50	Al Schmitz
648	Patagonia, Falkland Islands	Nov. 28–Jan. 3	1400	50	Harold Seielstad
	*Per person deposit. **Includes round-trip air fare from Miami.				
	HAWAII (Other Hawaii Trips are listed under Bicycle, Underwater Exploration.)			
108	Island of Hawaii (Makai)	Dec. 22–31	545*	25	Pete Nelson
	*Per person deposit; includes Hawaii round-trip air fare; Children under 12 $450.				
	HIGH-LIGHT			
115	Willmore-Jasper Parks, Canada	July 21–Aug. 1	280	25	Mary Lou & Al Combs
118	Mt. Robson-Jasper Parks, Canada	Aug. 3–14	285	25	Mary Lou & Al Combs
120	Idaho Primitive Area, Payette Forest, Idaho	Aug. 3–15	310	25	Jeff Thompson
125	Twin Lakes, Kings Canyon Park, Sierra	Sept. 1–8	195	25	Stuart Dole
126	Kaweah Country, Sierra	Sept. 8–15	195	25	George Hall
127	Horseshoe Canyon-Cataract Canyon Boat-Light, Utah	Sept. 14–25	395	25	Don Lyngholm
128	Upper Escalante Canyons, Utah	Sept. 20–27	205	25	Allen Malmquist
129	Under the Rim, Bryce Canyon Park, Utah	Sept. 27–Oct. 4	205	25	Allen Malmquist
130	Southern Arizona Desert	Dec. 27–Jan. 1	130	25	John Ricker
	KNAPSACK (Other Knapsack Trips are listed under Alaska, Canoe.)			
147	Miter Basin, Sequoia Park, Sierra	July 12–20	83	25	Larry Pohl
149	Pellisier Flats, White Mountains, California	July 13–20	73	25	Eric Bergh
151	Mount Woodworth, Kings Canyon Park, Sierra	July 14–25	115	25	Gordon Peterson
157	Adirondack Forest Preserve, New York	July 20–26	105	25	Walter Blank
141	Shotgun Pass, Sequoia Park, Sierra	July 25–Aug. 4	104	25	Ellen Howard
166	Baffin Island National Park, Canada	July 27–Aug. 14	845*	25	Keith Olson
158	Black Forest, Pennsylvania	Aug. 10–16	105	25	Ludwig Bohler
185	Goddard-Tehipite, Sierra Forest-Kings Canyon, Sierra	Aug. 22–Sept. 4	135	25	Bill Colvig
186	Toroweap Point, Grand Canyon, Arizona	Sept. 21–27	105	25	Don Campbell
187	Nankoweap-Salt Trails, Grand Canyon, Arizona	Oct. 5–11	90	25	c/o John Ricker
189	Sierra del Carmen, Texas-Old Mexico	Dec. 27–31	100	25	David Goss
	*Includes round-trip air fare from Montreal.				
	Mentally Retarded Adult Knapsack			
191	Collegiate Peaks, Colorado	Aug. 4–8	93	25	Joie Hartman
	Juniors Knapsack			
203	Little Claire Lake, Sequoia Park, Sierra	July 17–24	85	25	Sherri Brainard
101	Blackcap Basin, John Muir Wilderness, Sierra	July 18–27	90	25	Vicky & Bill Hoover
	SADDLE-LIGHT			
214	Flints Park, Canadian Rockies, Alberta, Canada	Aug. 11–20	430	25	Neil Jones
	SERVICE*			
	Clean-Up Projects			
219	Golden Trout Wilderness Restoration, Montana	July 17–27	50	25	Bruce Kingsley
	Special Projects			
235	The Olympic Sherpa, Washington	July 20–Aug. 8	65	25	Bill Reeve
	Trail Maintenance Projects			
239	Piute Pass, John Muir Wilderness, Sierra	July 15–25	50	25	Mike Bade
241	Krebs Creek/Chain Lakes, High Uintas, Utah	July 20–30	50	25	Jon Wellman
242	Deep Creek, Teton Ranger District, Montana	July 20–30	50	25	Alan Schmierer
243	Deer Lake, Spanish Peaks, Montana	July 29–Aug. 8	50	25	Bruce Kingsley
245	Deep Creek, Teton Ranger District, Montana	Aug. 1–11	50	25	Sleppy & Johnson
246	Harrison Lake Backpack Selkirk Range, Idaho	Aug. 3–14	50	25	Alan Schmierer
247	Piute Pass, John Muir Wilderness, Sierra	Aug. 16–26	50	25	Steve Silverman
248	Wahoo Pass, Selway-Bitterroot Wilderness, Idaho	Aug. 21–31	50	25	Brian O'Regan
	*Per person deposit.				

Trip Number		Date	Trip Cost (Incl. Deposit)	Deposit	Leader
	UNDERWATER EXPLORATION*				
317	Virgin Islands	July 10–21	620**	50	Bob Sextro
256	Kona Coast, Hawaii	Aug. 5–14	730***	50	Kent Schellenger

*Per person deposit.
**$160 additional for divers and student divers.
***Includes Hawaii round-trip air fare; persons joining in Hawaii $440; divers $100 additional; children under 12 $660.

WATER TRIPS

River Raft (Other River Raft Trips are listed under High-Lights.)

275	Rogue River, Oregon	Aug. 11–15	205	25	Martin Friedman
276	"River of No Return" Main Salmon, Idaho	Aug. 16–21	325	25	John Barnard
278	Chilcotin-Fraser Rivers, B.C., Canada	Aug. 17–26	670	50*	Monroe Agee
279	Middle Fork of the Salmon River, Idaho	Aug. 19–24	375	25	Harry Neal
280	Hells Canyon of the Snake River, Idaho	Aug. 25–30	325	25	Frank Hoover

*Per person deposit.

Canoe (Other Canoe trips are listed under Alaska.)

289	Upper Missouri River, Montana	July 1–6	93	25	Ellen & Bob Wilkinson
290	Delaware River, New York-Penna.-New Jersey	July 13–19	160†	25	Frank Springman
292	Snake River, Grand Tetons, Wyoming	Aug. 3–9	165	25	Frankie Strathairn
293	Kipawa Reserve Exploration, Quebec, Canada	Aug. 3–15	195	25	Dick Williams
294	Willamette River, Oregon	Aug. 17–23	155	25	Ann Dwyer
297	Niobrara River, Nebraska	Sept. 28–Oct. 4	150†	25	Ron Kurtzer
298	Rio Grande Canyons, Texas	Oct. 11–17	105	25	John Baker
299	Boquillas Canyon Canoe-Knapsack, Texas	Nov. 23–29	90	25	David Hollingsworth

†Canoes included in trip cost.

BOAT TRIP

328	Puerto Vallarta, Mexico	Nov. 3–15	**	50*	Ellis Rother

*Per person deposit.
**About $590 from Los Angeles, about $550 from San Antiono and about $440 from Puerto Vallarta.

IMPORTANT NOTICE! Sierra Club outings are subject to all Outing Department policies on reservations, cancellations, refunds and transfers printed in the 1975 Outing Issue of the Sierra Club *Bulletin*. A copy of these rules may be obtained from the Outing Department. Members are urged to check policy before making reservations.

SUPPLEMENTAL INFORMATION

Write for the Trip Supplement for the specific outing which interests you, to Sierra Club Outings, 1050 Mills Tower, San Francisco, CA 94104. Foreign Outing supplements will be sent as soon as available. Send 50c for each supplement requested *beyond the first five.*

MAIL TO: SIERRA CLUB OUTING DEPT. — P.O. BOX 7959 RINCON ANNEX, SAN FRANCISCO, CA. 94120

MEMBERSHIP NO. (CHECK BULLETIN LABEL)			Trip number	Trip name	Departure date
Print Name: Mr. Mrs. Miss	FIRST	LAST	DEPOSIT ENCLOSED $	(Leave blank)	No. of reservations requested
Mailing Address			Residence telephone (area code)		Business telephone (area code)
City	State	Zip Code			

PLEASE PRINT YOUR NAME AND THE NAMES OF ALL FAMILY MEMBERS GOING ON THIS OUTING	Age	Relationship	Membership No.	How many national trips (not chapter) have you gone on?
1.				
2.				
3.				
4.				
5.				
6.				

COST INDEXING THE ENVIRONMENT

Who writes those anonymous documents called environmental impact statements? Our author, among others. Here she tells what it's like and how it's done

BARBARA-ANN G. LEWIS

THE ENVIRONMENTAL Impact Statement (EIS) is a document issued by a federal agency planning a major action. These documents are faceless affairs, anonymous except for the name of a project manager to be contacted when necessary. Who are the people who write these pages? What are their technical backgrounds or expertise? What are their personal philosophies and to what extent do these influence the statements? Is any pressure exerted upon individual writers to prepare a statement slanted in a particular direction? This article will attempt to answer these questions, with particular reference to environmental impact statements issued by the U.S. Atomic Energy Commission (AEC, now NRC). It must be emphasized that the experiences and opinions expressed herein are strictly those of the author.

I was hired by Argonne National Laboratory in the spring of 1972 to write environmental impact statements for nuclear power stations. As a result of the Calvert Cliffs decision, the AEC contracted with Argonne to prepare such statements. (Other statements are prepared for the AEC by Oak Ridge National Laboratory and Battelle Northwest.) Argonne initially drew from its staff of engineers, physicists, chemists, and biologists to form the Environmental Statement Project (ESP). Within the first year, as the original troupe returned to their research, ESP began hiring new personnel expressly for the purpose of writing the statements. I was one of these new employees and presented myself as a professional soil scientist, an environmentalist with a grain of salt. I was not fanatically opposed to anything except nuclear and biological warfare. I was struck by the enthusiasm of the ESP staff to do the best possible job of assessing environmental impacts despite the paucity of data and possible outside pressures. I accepted a one-year postdoctoral appointment, and although the thought of abandoning pure research even for a while was upsetting, I was fired with eagerness to do my part in preventing or minimizing some of the damage being done by my species upon the small, mute earth.

My first months on the project were spent reading, day and night, on many aspects of our environment that I knew little or nothing about. Hitherto, for example, a fish was a pretty thing that lived in the water and had a lot of bones when you ate it. Now I was called upon to assess the impact of warm water on fish, and not just any fish, but very specific fish. I learned about life histories, migration and spawning habits, thermal and chemical tolerances, synergistic relationships, diseases, and so on. I also learned that we know these things only in a general way, that in a given area in a given river or lake, in some isolated part of a given state, there are very few data, if any, on the fish and other aquatic organisms that live there.

It was also necessary to learn about the innards of a nuclear power plant. I learned about the core and "radwaste" systems, turbines, gland seals, pumps, condenser tube materials, etc., etc. In the many months to come I was to learn that engineers and biologists, as groups, tend to look at a particular problem in different ways. For example, it wasn't at all clear to me why dry cooling towers could not be used everywhere, and thus eliminate the need for all that cooling water. The engineers patiently explained to me about wet- and dry-bulb temperatures, turbine back pressures, and dollar costs. On the other hand, the engineers could not understand why I was concerned about the well-being of insect larvae. After all, insects were pests, right? I patiently explained about food chains (which the engineers could accept), and tried to interject my own philosophy about man's place among the species (which the engineers could not accept).

Our group of about 40 individuals included engineers, physicists, chemists, geologists, a meteorologist, and a hodgepodge of biologists (microbiologists, terrestrial ecologists, wildlife biologists, botanists, aquatic biologists, fisheries biologists, soil scientists). Like the hedgehog and the tortoise of Kipling's story, little by little the engineers began sounding like biologists, and biologists began walking around with calculators in their pockets. No name, comparable to Kipling's armadillo, has yet been given to the person who emerges after two or more years of writing environmental impact statements. (I refuse to accept the term "fat bureaucrat.") To borrow from Dr. Alvin Weinberg, former director of Oak Ridge National Laboratory, perhaps "transcientist" would be appropriate. Whatever it is, what we do is certainly not Science in the traditional sense of the word. We have no laboratory, no equipment, and no time. We do have pads of paper, pencils, libraries, a phone to anyone in the U.S., and deadlines. We also have the volumes entitled "Environmental Report," which are submitted to the AEC by a utility as part of its application for a license to construct or operate a nuclear power station. And we have the AEC's project managers, branch chiefs, and lawyers.

An environmental impact statement issued by the AEC may evolve as follows, starting from the day Argonne receives several copies of the utility's Environmental Report (ER) from AEC headquarters. A team is selected by our deputy manager, and usually consists of two or three biologists, an engineer, a physicist, a chemist, a geologist, and a meteorologist. One is designated as team leader. An individual may be serving on two or three

teams simultaneously, at various stages of the work.

The team spends about two weeks studying the ER and preparing questions to the utility. In my experience, no ER has been completely adequate in terms of supplying information necessary for an assessment. However, except for a few cases where the ER was totally rejected by the AEC, the deficiencies in these reports can be corrected by requests for additional information, which is subsequently supplied by the utility as supplements to the ER.

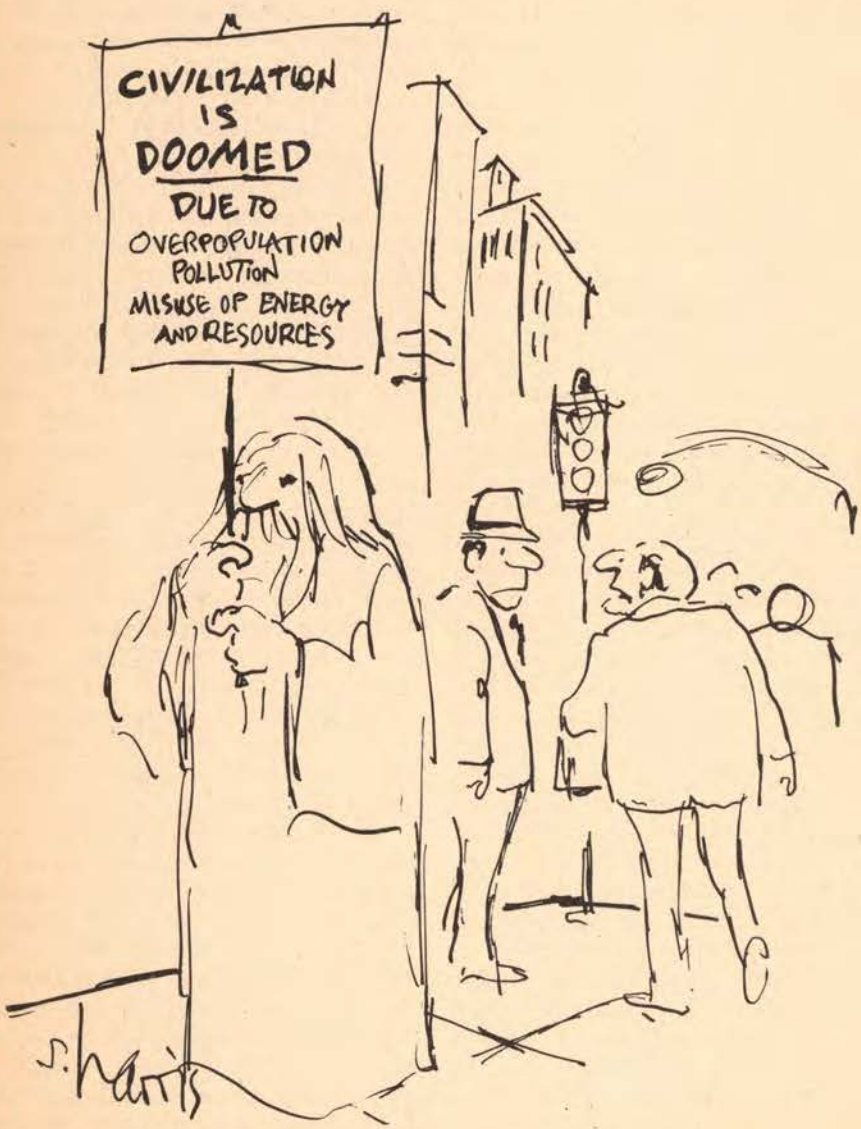
The team then makes a three- to four-day visit to the site of the proposed nuclear power station. Depending on the interests of the particular team member, one wades around in the water, another picks up a clump of soil, another frowns at a particular shrub. No one pretends it is "field work," but it gives the impact-statement writer a better idea of the site than merely reading about it in the ER. A practiced eye can look at a river bank and make a pretty good guess at the tendency for erosion during construction, and what erosion-preventive measures should be imposed on the utility. The term "wooded area" conjures up a different picture for a person reared in northern California than for a person reared in Illinois, and a first-hand observation of a particular "wooded area" can modify any preconceptions. The site visit also provides meetings with the utility's environmental consultants, who are often well-qualified scientists but limited in their field work by budget restrictions. The team also meets with state and county officials, as well as other groups or individuals, to inquire into local concerns about the siting of the station.

Back in a little cubicle at Argonne, the statement writer buckles down to work, spending six to nine weeks plowing and replowing through the ER, searching through and studying the scientific literature, picking the brains of outside scientists via telephone calls and letters, pestering the utility and its consultants for more details. There is much communication among the team members: the biologist needs to know how hot that thermal plume will be, and how much of the waterway it will occupy. He hounds the physicist for answers. That physicist is trying to model the thermal plume and hounds the hydrologist for data on seasonal river flow velocities. The cost-benefit man needs to know how many fish and plankton will be lost due to the power plant and hounds the biologist. All of them are hounded by the team leader who is conscious of the deadline rushing at him. Nor is it always that orderly. The cost-benefit man becomes irritated because the biologist cannot give him a number for fish that will be killed on the water-intake screens. The biologist is irritated because even if he could give such a number, he doesn't know what that number means in terms of the well-being of that particular river system, because data on fish-population dynamics of that river are nonexistent or very meager. The physicist is irritated at the inadequacy of available data on water temperatures and stream-bed configuration. All may take out their irritation in various ways, e.g., by picking an argument with the hapless team leader or going home and kicking the dog.

Finally, a preliminary draft environmental statement (PDES) is put together with the help of a technical editor, and is then reviewed by a completely different team. Constructive criticism during this peer review does much to improve the document. Occasionally, one or two individuals may get hot under the collar over a particular item (when there are seven biologists around a table, there will be seven different opinions), but the good fellowship and mutual respect within the group at Argonne allows such conflict to occur without becoming personal or long term.

Within a day or two of this re-

Continued on page 30



"They *used* to be thought of as crackpots"

Toward a New Alliance

Consumption and Environment

CONSUMER GROUPS and environmental organizations both greatly broadened their interests in the late 1960's. The environmental movement, the natural offspring of early efforts to protect America's wilderness and wildlife, extended its concerns to what were thought to be the underlying economic causes of environmental degradation. The consumer movement, which focused at first on product safety and marketing practices, began to address the issues—such as pricing and taxation policies—it believed to be the root causes of such problems. Throughout the formative years of both movements, there was little conflict between their goals; they shared a community of interest on most issues and worked closely together on many others, particularly pollution.

Now there are signs of a growing schism over one of the most basic of all issues—energy policy. If this schism is allowed to widen, the interests of neither constituency will be served. To narrow the gap, both sides will have to give a little.

Environmentalists have come to recognize that while we focus on the undesirable impacts of energy-source exploitation, we must also get at the ultimate cause of those impacts—increasing demand.

In the last year, more and more people have come to accept the thesis that while laws, regulations, and standards are essential to improve our efficiency in the utilization of energy resources, the price mechanism can also make a significant contribution toward this end.

Because people tend to act primarily in their own self-interest—either for good or evil—society is forced to pay the costs of enforcing laws and regulations. But this same aspect of human nature suggests that, with respect to levels of energy consumption, that market forces can be particularly successful in accomplishing some of the same purposes toward which the various laws and regulations are directed, *i.e.*, reducing the impacts of energy-resource recovery.

If prices contain the true "messages" about the actual environmental costs of obtaining and consuming energy, people will make socially desirable choices while operating in their own self-interest. They will purchase wisely, buying what they can really afford, saving money and reducing energy consumption simultaneously.

But if we, as environmentalists, rely too much on this important principle, we may find ourselves out on a weak limb. As we continue to advocate the full internalization of environmental costs in the price of energy, we must also recognize that institutional changes will be necessary, and that there are limits to the costs that can be added to the system at any one time. We are now adjusting, in some places painfully, to the end of the era of cheap energy. One obvious effect has been rising prices and unemployment. To insist that energy prices be increased overnight, without considering the impact of such increases on various sectors of the economy, may not be our best course for the moment. Instead, this may be the time to focus on bringing about the institutional changes that will make such increases palatable to the public. We can encourage the nation as a whole to:

- Establish a national goal for energy conservation;
- Set mandates for federal agencies that will cause them to implement energy-conservation programs;
- Augment and make more visible the energy-conservation program within the Federal Energy Administration;
- Change policies that discourage the recycling of materials;
- Set efficiency standards for both automobiles and buildings. Leadership and visibility in such a national effort is badly needed; ultimately, it must come from the Administration.

> "Throughout the formative years of both the environmental and consumer movements, they shared a community of interest on most issues and worked closely together on many others. Now there are signs of a growing schism over one of the most basic of all issues—energy policy. If this schism is allowed to widen, the interests of neither constituency will be served. To narrow the gap, both groups will have to give a little."

On the other hand, consumer groups seem to be crawling out on another weak limb in their efforts to redress the long-standing distortions of the market place in the favor of the energy industry. In spite of much wishful thinking to the contrary, we do indeed have an "energy crisis," and we are most unlikely ever again to have inexpensive and abundant energy. We have a *demand* crisis more than a supply crisis. In other words, our demand for energy has increased beyond the point where it can be gratified easily and cheaply. As the underdeveloped nations increase their demands for the same resources, our share must necessarily become smaller and what we pay for it is going to increase. Although this demand crisis may not be clearly perceived in this country without the hard light supply shortages in the form of gasoline lines to illuminate it, it will remain with us like a shadow nonetheless.

We hope that consumer groups will not try to compromise meaningful conservation measures in the hopes of a perennial, inexpensive abundance of energy. To use up our petroleum reserves now as a way of temporarily sustaining this illusion will only create a less certain future. A new "energy trust fund" (see the Washington Report) designed to finance the development of energy resources ignores the demand crisis and supposes that we can return to the good old days of cheap fuel. Even if this were possible—and it is not—such a fund could as quickly get out of hand as did the highway trust fund, and could become little more than a means of subsidizing the energy industry out of the public coffers. Sooner or later, the environmental costs of such easy answers will come due—in the form of hazards to public health, increased pollution, low rates of return on the remaining public resources, and reduced options in an uncertain future.

If price increases are necessary to moderate demand, moneys from such increases need not filter into the pockets of industry. Taxes well programmed into current economic realities, such as a Btu tax on all energy, excess profits taxes, or a gasoline tax, can be designed to filter dollars into programs that will further moderate demand, such as subsidies to mass transit and

public-service employment to effect such changes as the insulation of older homes. Energy-tax revenues can be rebated to the public on a per-capita basis to ameliorate whatever regressive features may be built into the taxes. Inflation *is* an important, economy-wide problem, but it cannot be solved by abandoning needed environmental and consumer reforms. Both interests can begin to work together to discover and attack some of its root causes. Environmentalists cannot afford to ignore the social and economic context in which needed changes must take place; consumers cannot afford to ignore the future for the sake of an easier present. *Eugene V. Coan*

WASHINGTON REPORT

Brock Evans

Western Coal and Washington Politics

THE FIRST DAY OF SPRING was "COAL DAY" at the White House, an occasion when the Ford Administration offered homage to leaders of the coal industry. Nearly all of the important representatives of the Administration were there. "There's no more important group in this country," said then Secretary of the Interior Rogers Morton. "I beg you to come in and talk to us and tell us what your problems are. Only if we have the input of business will we make the correct decision," said Secretary of Transportation William T. Coleman, Jr.

The industry men allowed that they might be interested in helping out the country with more coal production—provided certain conditions were met, of course, including a wholesale relaxation of Clean Air Act standards and deadlines, a veto of strip-mine legislation, a relaxation of mine safety standards, limitations on preparation of environmental impact statements, and federal subsidies. "We realize that risk is part of the free enterprise system," said Ralph Bailey, president of Consolidation Coal Company. Even so, he said the depletion allowance for coal should be increased from 10 percent to 15 percent and the investment tax credit should be increased.

We know from meetings like this and from its legislative program where the Ford Administration stands on Energy Policy. In his energy message at the beginning of this year's session of Congress, President Ford announced his program, which has subsequently been introduced for full consideration by the Congress. It includes a large-scale expansion of nuclear plants and offshore oil leasing; a relaxation of Clean Air Act standards to permit the burning of dirty coal; weak strip-mine-control legislation; some conservation measures, and a great increase in the price of imported oil, to set a "price floor" which then, hopefully would stimulate the development of much more expensive synthetic fossil fuels in the West.

There is not a great deal in common between the Administration program and that of the Sierra Club. Ours involves not just a heavy emphasis on mandatory conservation measures, such as improved gas mileage and building insulation standards, but also sophisticated and careful use of taxes and regulatory measures to make certain that the energy industry receives no subsidies, and that energy is priced at its "true cost." We favor mass-transit systems instead of highways, emphasis on solar and wind-power research rather than nuclear, and smaller cars. As for increasing the supply of energy from traditional sources, we place heavy emphasis on deep-mined coal—there is a 100-year supply of low sulfur coal east of the Mississippi that can only be deep-mined. The methane gas in such mines, formerly thought of as waste, can be tapped to nearly double our natural-gas production. We favor strict regulation of further offshore oil development and stripmining; and of course, support a strong Clean Air Act.

But where does Congress stand? So far, we don't know, but there has been a tremendous flurry of activity over the President's Energy Message. For weeks, the published notices of hearings on energy subjects have been literally black with small print. There are simply too many of them for the five Sierra Club lobbyists in Washington to possibly attend. We cannot have an impact on *all* of them. So we have tried to be selective, concentrating on the two broadest phases of our main concern: protection of the environment from the problems of energy production and establishment of new policies to direct future public and private energy investments. So far, we are doing reasonably well in the first category, but the picture is unclear in the second.

On the plus side of the protection category, Congress has finally passed a strip-mine bill which, although weakened somewhat from last year's, still will be a good start at regulating this terribly destructive practice. President Ford, acting on behalf of the coal industry once again, is expected to veto the bill. But there should be enough votes this time to override it. Environmentalists are also busy working on legislation to regulate and control the pace and impact of offshore oil leasing and drilling. This legislation has the strong support of many of the senators from the coastal states, and ought to pass in reasonable form this year. Hearings on proposed extensions of the Clean Air Act have been taking place for several months now, and the strong indication from both House and Senate committees is that there will be little or no weakening of their standards, despite strong attacks from the Administration and from various industries.

The situation is still not too good in the research field, since over 70 percent of the Administration's proposed budget for the Energy Research and Development Administration is related to various applications of nuclear energy. Substantial increases are proposed for solar power, conservation measures, and others of environmental im-

portance, but the imbalance is extremely great.

Just as problematical is another bill, the Energy Conservation and Conversion Act of 1975, which is now being processed through the House Ways and Means Committee. The bill has a number of complicated provisions, including taxing automobiles according to fuel economy, windfall profits and domestic oil and gas production, and taxes designed to save gasoline, as examples of some of the conservation measures proposed. For environmentalists, one of the biggest problems with the bill is that it also creates an "energy trust fund," which can grow to about $10 billion before 1984. The trust fund would be used for a number of purposes, including research programs for new energy technologies, and for buses and mass transit. Unfortunately, major portions of the bill also provide for trust funds to be used for such environmentally destructive and high-cost energy technologies as oil shale, and coal and gas liquefaction, which will have a tremendous impact on the agricultural lands of the West. An unfortunate feature of the bill provides for "price guarantees" on long-term purchase contracts for other new energy sources—just about the same as President Ford's "price floor" program to subsidize expensive oil shale development.

Our past experience with other trust funds, such as the Highway Trust Fund, makes us wary of this one. Regardless of all the other provisions of the legislation, a powerful lobby of oil companies and utilities is sure to be formed—just like the Good Roads Association with the Highway Trust Fund—to make certain that a vast bulk of the money is spent in subsidizing their expensive energy development in the West, rather than on cleaner technologies or on conservation measures. This bill is heavily opposed by elements within the Administration, and other interests, for a variety of reasons. Its prognosis is unclear at this time. But it demonstrates, along with the other bills mentioned, the strong efforts to be made in Congress now to grapple with the energy situation. •

EDITORIAL

Kent Gill

Agriculture, Environment, and the Sierra Club

AGRICULTURE HAS LONG been the dominant activity in the human use of land. Therefore, agricultural practices and policies are significant determinants in how the land base is going to be treated. Yet the Sierra Club has never developed a comprehensive policy relating to agriculture. Instead, some specific club decisions on water projects, pesticides, predators, and planning have impinged unevenly upon our attitude toward farm and range operation.

The Northern Plains Regional Conservation Committee (NPRCC) has forcefully called the problem to the attention of the national club. At a meeting held on the high plains of Wyoming and Montana, Sierra Club leaders and ranching interests, faced with the massive development of the coal resource by big energy companies and with the destruction of a way of life, began to identify a community of interest. However, the absence of an agricultural policy made it difficult for the Sierra Club units there to be guided in forging alliances. The NPRCC moved into the vacuum and drafted an interim policy statement addressed to the particular issues in that geographic region.

As the statement was distributed among club leaders, constructive criticism began to develop. Some critics of the statement found inconsistencies with other club positions; others noted that the policy was applicable principally to Northern Plains problems; still others took issue with some of the planks. At the May meeting of the Sierra Club board of directors, the need for an agricultural policy was discussed and widely accepted; the Northern Plains people had served the club well by initiating this important dialogue. The board made plans for the early initiation of a policy project which would involve many Sierra Club members and units, which would seek both technical and philosophical contributions, and which would result in the preparation of a comprehensive agricultural policy broadly applicable to the club's stance toward the nation's food-and-fiber production.

The dimensions of such a policy are interesting to consider. For instance, it must tackle the question of how important are agricultural enterprises in comparison with competitive uses—industry or urban development or recreation or wilderness. It must provide us with a way to judge when agriculture must be an exclusive use of land and when a given area can accommodate multiple compatible uses, including agriculture. It has to address such basic economic issues as corporate farming (in contrast to the hallowed family farm), tax policy as it affects agricultural use of land, and public subsidy.

Some fundamental ecological considerations must be studied. The following questions might be raised:

In a human time scale, is soil a destructible or a renewable resource?

Can the larger ecosystem tolerate the water demands of intensive, irrigated agriculture?

How do agricultural chemicals affect the native plants and animals—and soil longevity, as well?

The energy efficiency of agriculture will become an issue, the question being whether in an energy-short world the caloric productivity of agriculture will exceed the required energy input by some responsible amount. Soil conservation will have to be viewed more broadly than only the retention of physical volume, by inquiring as well into maintaining the chemical viability of the soil to act as an energy interceptor.

Then thorny problems of range management, land-planning policies, predator control, and water diversion will have to be addressed in terms of Sierra Club principles.

Because the Sierra Club does operate from a set of basic precepts, we can predict that the final policy will reflect a concern for the natural scene: for protection of native species and natural ecosystems. The policy undoubtedly will define how much agricultural manipulation can be tolerated in which areas. It will most likely call for the fullest possible knowledge for decision-making, including broad analyses of environmental impacts by all applicable sciences. We will probably want to speak to the limits of technology, questioning whether technology can solve all the problems, including those it creates, doubting that artificial systems have the built-in balances of natural ones. And Sierra Club policy will hopefully take the long view, projecting past the 20th century to future centuries and millennia.

REGIONAL REPS REPORT

Southwest: Coal Gasification

AT ONE TIME it looked as if the first operational, large-scale coal gasification plants in the United States would be located on the Navajo Indian Reservation in northwestern New Mexico. That optimistic projection is somewhat in doubt, although interest in the proposals is still very much alive. Two companies have plans for plants in this area. The Western Gasification Company (WESCO) plans call for the initial plant, producing 250 million cubic feet per day (MMCFD) of substitute natural gas (SNG), to be in operation in 1978. The addition of three similar plants by WESCO would bring their production to 1,000 MMCFD by 1983. Coal for the plants will come from a nearby strip mine to be operated by Utah International, which also holds the necessary water rights. The Federal Power Commission (FPC) has just recently authorized WESCO to mix the SNG with natural gas in existing pipelines. The biggest remaining obstacle facing WESCO is the approval by the Navajo nation of the lease for the plant sites themselves, plus rights-of-way.

A similar timetable had been projected by El Paso Natural Gas Company (El Paso) for their two complexes to be located a few miles south of WESCO's plants. The first, producing 288 MMCFD, was to have become operational in 1978. The addition of a second complex and expansion of both would have increased El Paso's output to 785 MMCFD in 1981. In addition to the Navajo tribal approvals similar to those sought by WESCO, El Paso needs permission of the FPC, and Congressional approval of their use of San Juan River water.

The projects would primarily serve customers in Arizona, Nevada and California, although Midwestern customers could also expect some benefits from an increased gas supply. To place this in the proper perspective, the ultimate output (1,785 MMCFD) of the two companies' plants combined would supply about 2.5 percent of the current demand for natural gas in the United States.

The schedules for both WESCO and El Paso seem hopelessly optimistic, although WESCO is clearly in the better position. The Navajo nation is deeply divided on the issue and negotiations with the tribe are likely to be protracted. Navajos living on and near the sites of the proposed plants and strip mines are overwhelmingly opposed to them. On three occasions, members of the Burham Chapter of the Navajo nation have been asked to approve the proposed projects and each time they have rejected them. The most recent vote on April 18 was 114 to 14 against the projects. Although the Navajo Tribal Council is not legally bound by this vote, they are very reluctant to go against the wishes of the local residents. Still there is strong interest among the Navajo tribal leadership in proceeding with the projects. The proponents see development of the tribe's mineral resources, including coal, as one of the more hopeful means of providing jobs on the reservation where unemployment exceeds 50 percent. Moderates among the Navajo suggest that some development might be permissible, but only if done on a smaller scale and if owned and managed by the tribe.

What can we expect if the projects are built? To some, the region is a sparsely populated desert already blighted by the notorious Four Corners power plant and strip mine located a few miles to the north. To Burham Chapter residents, it is the only home they have ever known, and it is unlikely that all these people, many of whom have little formal education, could find employment in the plants.

The draft environmental impact statements on the projects, prepared by the Bureau of Reclamation, estimate that the plants will bring an additional 40,000 people to the area. WESCO and El Paso financed a study of possible new towns to house the workers and their families, but little has been done in the way of implementing the study. In view of the lack of housing and community services, one wonders if the people needed to build and operate the plants could be attracted to the area.

This flood of new people would almost surely completely destroy the culture and life-style of the local residents. It would likely include a sizable non-Navajo population, since not enough trained Navajo would be available within the compressed timetables of the gasification companies.

Much concern has been expressed over the socioeconomic stresses that can be expected from these projects, but few have seriously considered what will happen when the coal is gone and the plants are shut down. What will support the region's population then? Questions have also been raised about the use of water by the coal gasification plants. WESCO and El Paso say they will need a total of 61,500 acre-feet of water from the already overcommitted flow of the San Juan River. Some worry that the actual need will be greater than that, but in any event, use of water for gasification could infringe on the amount available for the Navajo Indian irrigation project.

The many problems, plus a shortage of construction capital, seem to have discouraged El Paso from trying to meet their earlier projected timetable. They have asked the FPC to defer action on their application. Although company officials deny they have abandoned the projects, it seems increasingly clear that they have lost interest in it, at least for the short term.

The Navajo face one of their most crucial decisions. Are the employment and economic benefits worth the cost, and if so, how can the problems be minimized? If some development is to proceed, then the manifold problems would seem to argue that it be stretched out over a much longer period of time. This would extend the life of the coal-based economy, tend to reduce the socio-economic stresses resulting from boom-type growth, and provide an opportunity to learn from earlier mistakes. In the last analysis, it is a decision that should be made by the Navajo people themselves, hopefully without undue influence by energy companies, bureaucrats, or well-meaning outsiders. Increased awareness among the Navajo gives us some hope that it will be a well-informed and carefully considered decision.

John McComb

BEQUESTS, TRUSTS, AND MEMORIALS

THE CLUB would like to remind its members and friends that bequests to the Club can contribute immeasurably to the support of our work through the years. Our tax attorneys will be glad to consult with you and your legal adviser as to the best method of framing your will in order to serve your interests and meet the Club's needs. This includes advice on the use of trusts and insurance policies to benefit Club programs through one of our two related tax-deductible organizations.

If you desire information, please contact the Executive Director at 1050 Mills Tower, San Francisco, CA 94104.

It may also be useful to remind you that memorial and other gifts are frequently made to assist our program. These are carefully acknowledged to the family of the person so remembered.

FROM THE EDITOR

The Bulletin Looks Ahead

WE ARE VERY PLEASED to announce that, beginning with this issue, the *Bulletin* will have both a new editor and a new managing editor. Stephen Whitney, the managing editor, has been working with the *Bulletin* almost three years, and his promotion is well deserved. I am new to the Sierra Club and am delighted to be here. For years I have been writing about urgent environmental concerns for various magazines and audiences, and, while there was much avowed interest, I was often discouraged by the obvious lack of commitment of my readers. So now, it is with a comforting sense of relief and anticipation that I come to the Sierra Club and I am looking forward to being a working part of this vital organization.

The *Bulletin* is the only publication the club sends regularly to all its members—plus thousands of other people who are interested in conservation—and therefore it is in a unique position to provide a nationwide forum for discussion and exchange of information among all of us. Making sure that everyone knows what is happening—the problems and also the solutions as they become clear—is necessary for any organization devoted to action. Knowing the facts is the key to successful action, and in these pages we have the perfect place to nourish what is already coming to be a national network of involved and knowledgeable people. This is why the *Bulletin* is important: it provides a forum in which we can all talk with one another.

I would like to mention here some of the plans Steve and I have for the coming months, but in doing so, I must also stress—albeit briefly—that the *Bulletin*, like most other publications, is feeling the effects of the current recession. Advertising and other revenues are down; costs are up. So, even as we try to expand the magazine, we must also save money—a neat trick, at best. We hope you will not only bear with us, but encourage us, as we continue to experiment with different paper stocks and type faces, with alternating color and black-and-white issues, with size and frequency of publications—all in an attempt to get the most from what resources we have.

Beginning in the fall, we will increase our coverage of chapter and membership news, especially those recent local problems that have been resolved successfully through chapter action. The power to make news or policies public, in order to influence what happens, must be made to work for *us*, as others make it work for them. For instance, it has been reported that the beverage industries spent $1 million on a successful publicity campaign in Dade County, Florida, convincing voters to defeat a deposit-bill referendum. The *Bulletin*, with nowhere near that amount of money, hopes to use more of its pages for our chapters to recount *their* experiences and what *they* have learned, so that our future efforts will be more swift and effective.

In this regard, and in another, we want to hear from you. If, having read an article in the *Bulletin*, you find you have differing or additional information you would like to share with other club members, write us a letter—it does not have to be an article—and we will try to publish as many as we can.

We intend to change the format of the Commentary section, not only to accommodate the above changes, but to allow us to publish more conservation news, both from inside and out of the club. We also plan to give space to brief reviews of newly published books we think will be of interest to our audience. We probably will not devote much space to any one book, but, instead, will try to present a broad sample of the various new books on nature and environmental concerns.

In addition, related articles will be presented together, like the two on East Africa published in this issue; we are also considering for our schedule each year, the publication of one "special" issue on an outstanding and timely subject. In February, for example, we hope to publish a complete issue on the wilderness—our part in the nation's Bicentennial celebration.

And, of course, we will continue to publish articles about interesting places and trips into the wilderness, along with the many beautiful photographs and illustrations that enhance the magazine.

Last, I want to emphasize again that the *Bulletin* intends to be part of the entire Sierra Club process, and I, too, will work with the chapters and members, not only with the staff members here in the offices. So, if you have any comments about the magazine, if you have any suggestions, please do send them. I'll be glad to hear from you. *Frances Gendlin*

REGIONAL REPS REPORT

Southern California: Atoms for L.A.

ENERGY ISSUES continue to dominate conservation work in Southern California. Drilling for offshore oil, building superports and liquefied natural gas terminals, and importing electricity from new coal-fired plants in Nevada and Utah are all being proposed. But at the top of the list as the super energy proposal is the San Joaquin Nuclear Project (SJNP).

With the distinction of being the largest nuclear-fission project in this part of the world—only Japan is proposing a larger complex—the SJNP will take over 2,500 acres of farm and grazing land near the small community of Wasco, 33 miles northwest of Bakersfield and 32 miles from California's infamous San Andreas earthquake fault.

Here in the San Joaquin Valley, which is some of the nation's richest farmland, four 1,300-megawatt reactors will rise above the flatland to jointly produce 5,200 megawatts of power. And cooling towers 150 feet tall will dominate the scene as they spew forth water vapor from the 100,000 annual acre-feet of water needed to cool the four reactors.

This gargantuan project is being directed by the Los Angeles Department of Water and Power (DWP) which will reap nearly 45 percent of the electricity produced. Other participants include Southern California Edison, Pacific Gas and Electric, other municipalities, in addition to the California Department of Water Resources, which wants more power to pump more water south. Consequently, the project has been called a statewide endeavor, even though the residents of Kern County where the reactors will be located can think of it only as another power grab by powerful and power-hungry Los Angeles. Local opposition to having Los Angeles' nuke as a neighbor has been best expressed by the stickers that adorn bumpers in Kern County, reading simply: "Stick it in LA."

Kern County's opposition has many facets: well-founded fears about the dangers of nuclear power; anger at being forced to accept all the risks when Los Angeles will reap most of the benefits; frustration over its lack of power to affect decision-making on the project; uneasiness about a nuke in earthquake country. But the overriding local concern thus far has focused on these plants' voracious thirst for water.

In an area where water is scarce and agriculture is king, the farmers are upset about the new competition for water this project poses, especially for this much water. In fact, Senator Howard Way, chairman of the State Senate Committee on Food and Agriculture, has taken a public stand against locating any nuclear power plant in the interior of California when agricultural water would be used as the plant's coolant.

Beyond the project's 100,000-acre-feet-per-year thirst, the farmers have other worries. One concern is what impact all this water vapor will have on weather and consequent vegetation growth in the valley, where severe temperature inversions already account for long-lasting tule fogs.

Wasco farmer Jim Neufeld has talked about another fear: "If at any time a small leak of radioactive material occurred at the plant, no matter how insignificant, the publicity would be bad, lowering the value of the crops. There's no advantage from an agricultural standpoint in having the plant in the Wasco area, as opposed to someplace else. It's against agriculture and this is agricultural land. We're the second county in the nation in agricultural production, after Fresno," he has said, "and we are aiming to be number one."

Even without an accident or leak at the reactors, however, the project will remove considerable acreage of farmland from production. A group of farmers opposing the project have estimated that this loss of crop production could amount to $188 million a year.

From the beginning, the Sierra Club of course has spoken out against this project because of our standing policy opposing the licensing, construction and operation of new nuclear reactors pending the resolution of the significant safety problems inherent in reactor operation, disposal of spent fuel, and possible diversion of nuclear material capable of use in weapons manufacture.

In addition, we have repeatedly questioned whether the Los Angeles Department of Water and Power was proceeding on this project without regard to the California Environmental Quality Act. In particular, we asked how DWP could award substantial contracts before completing an environmental-impact report as required by state law. Finally, but only after California Attorney General Evelle Younger warned against proceeding without an impact report, DWP management backed down and consented to the report, which was released late in April.

Meanwhile, the Sierra Club, along with other citizen groups, has focused on the economics of the project and come up with some startling facts. Most important: in less than a year, the construction costs for the project have risen from $2 billion to $4.8 billion, even though the original estimate took inflation into account. Certainly, we have said, the Los Angeles DWP, which claims to be building this nuclear project to save its ratepayers money, owes the ratepayer an explanation of why costs have more than doubled, especially when the original figures included escalation costs. More to the point, we have asked how DWP can claim to be saving its ratepayers $50 million a year by building this project when the cost of the project has risen $2.8 billion in ten months!

Furthermore, we have pointed out that this $4.8-billion cost figure accounts only for construction and does not include the costs of nuclear fuel, cooling water, transmission facilities and operation and maintenance. According to our analysis, fuel costs over the lifetime of the reactors may raise the price of the SJNP to over $12 billion.

After revealing the results of our investigation on May 6, we called upon Los Angeles Mayor Tom Bradley to initiate an indepen-

dent review of the DWP economic reports on the project. Also, because utilities throughout California are involved in the project and the economic questions we raised have statewide implications, we sent our analysis to Governor Edmund G. Brown, Jr., California's new Energy and Resources Development Commission, and the State Public Utilities Commission. Our criticisms are sure to provide some lively debate on the true costs of nuclear power generation.

Another related public debate, which promises to be even hotter and more complicated, started the same day we released our economic study. It centers on the nuclear safeguards initiative, which the Sierra Club supports and which nearly 500,000 people in California signed to qualify it for the June 1976 ballot. After one year, this initiative would prohibit nuclear power-plant construction and prohibit operation of existing plants at more than 60 percent of original licensed core-power level unless federal liability limits are removed. After five years, the initiative requires the derating of existing plants by ten percent each year unless the legislature, by two-thirds vote, has confirmed effectiveness of safety systems and waste-disposal methods.

Opposition to the initiative is being led by former Governor Pat Brown, Sr., and his Citizens for Jobs & Energy. These "citizens" include Robert Phillips, recently retired general manager of Los Angeles' Department of Water and Power, Howard Allen, vice-president of Southern California Edison, and Norman Houston, chairman of Golden State Life Insurance.

We think the voters have the right to question, through this initiative, the claims of the nuclear industry and the utilities. But whether or not the voter gets that chance will depend on whether we can articulate, over the cacophony and confusion the opposition will surely create, the basics of our concern over nuclear power. At least we have a year to try. *Mary Ann Eriksen*

NEWS VIEW

Board elects club officers at annual organization meeting

THE SIERRA CLUB board of directors held its annual meeting May 4-5 in San Francisco. Officers for the coming year were elected as follows: President, Kent Gill; Vice-President, Ted Snyder; Secretary, William Futrell; Treasurer, Paul Swatek; Fifth Officer, Holway Jones. In addition, Joseph Fontaine was selected by the board as its fifteenth member. Fontaine replaces Claire Dedrick, who resigned last February to become California Resources Secretary. Formerly Southern California regional conservation committee chairman, Fontaine lives in Tehachapi, California, where he teaches high school science.

The conservation agenda included four items which the board discussed and acted upon:

FERAL BURRO POLICY: Feral burros, currently protected by federal legislation passed in 1971, pose an increasingly alarming problem in the Southwest, including Southern California, by destroying habitat and competing with native wildlife. In response to this situation, the board adopted policy as follows:

> The Sierra Club calls for the control of feral burros in a manner which protects native flora, fauna and soils. In addition, the Sierra Club adopts as suggested guidelines for this policy the "Sierra Club Feral Burro Management Policy" prepared by the SCRCC Desert Subcommittee and the Wildlife Subcommittee of the Angeles Chapter.

Containing 13 specific recommendations for burro management and ecosystem protection, the policy calls for humane treatment of these feral animals while acknowledging the need to remove them from national parks and monuments as well as from all public lands where they are degrading habitats in which endangered or threatened species of flora and fauna exist.

HUNTING POLICY: The board decided that no change was needed in the club's existing policy on hunting—a provision in

current wildlife policy which accepts well-regulated periodic hunting, among others, as a management technique. The National Wilderness Committee had urged a resolution which would have had the club accept "provisions in basic laws that recognize hunting as a legitimate use of wilderness areas of the national forests and other appropriate public lands."

AGRICULTURAL POLICY: A regional agricultural policy drafted by the Northern Plains RCC pointed to the need for the club to adopt a broad agricultural policy which would encompass national goals and present guidelines to groups who wished to make regional policies on agriculture. To this end, it was decided that a task force would be established which would receive input from the relevant club entities and individuals with expertise and interest in the various areas involved. Discussion of a national agricultural policy is anticipated at the Labor Day meeting of the board, and consideration of a formal statement is expected in October.

PET 4: At its meeting in March, 1975, the club's executive committee passed a resolution cautioning against hurried marketing of oil from the Elk Hills Naval Petroleum Reserve and against oil production from Petroleum Reserve 4 on Alaska's North Slope. At the recent annual meeting the board reaffirmed that policy and added to it a further statement with regard to "Pet 4":

> The Sierra Club believes that oil resources within Naval Petroleum Reserve 4 in Alaska should be held in reserve for possible future use and that immediate emphasis should be placed on conducting basic environmental studies of the area's surface resources. These studies should lead to preparation of a comprehensive land-management plan which would identify areas of critical environmental concern, such as caribou and waterfowl habitat and areas used by Alaskan natives for subsistence. The plan should protect these areas and allow further oil and gas exploration only in places where exploration and development would be compatible with protection of surface resources. The club urges that administration of the surface resources be immediately vested in the U.S. Fish and Wildlife Service, with key areas such as the Utukok (caribou calving ground) and Teshukpuk (waterfowl habitat) to be placed in wildlife refuges.

The Japanese may request permission to hunt the protected gray whale

Recent reports indicate that the Japanese government will request permission from the International Whaling Commission (I.W.C.) to resume "harvesting" of the gray whale, which has been protected by international treaty since 1947. It is further rumored that a Japanese firm operating out of Los Angeles has approached the Mexican government with a request to take grays in Mexican waters, where they go to breed.

The I.W.C. convenes in London on June 23. If the above rumors are true, it would be too late *then* to do much about them. Since there is good reason to believe they are true, it is important that those concerned about the gray whale express themselves now, while there is still time to act. The gray whale can be saved. Letters insisting on continued protection for the gray whale should be sent to: *R. Stacey, Secretary, International Whaling Commission, Great Westminster House, Horseferry Road, London, S.W. 1, England.* You should also write to: *Dr. Robert White, U.S. Commissioner, International Whaling Commission, National Oceanic and Atmospheric Administration, Rockville, Maryland 20852.*

Auto makers relax emission-control efforts

A report prepared for the Environmental Protection Agency (EPA) demonstrates that U.S. automobile manufacturers have virtually ceased all efforts to develop the technology necessary to comply with 1978 auto-emission standards for at least one major pollutant, oxides of nitrogen (NO_x). The report, "Auto Emission Control: the Technical Status and Outlook," was cited by EPA administrator Russell Train in a March decision granting auto makers more time to comply with hydrocarbon and carbon monoxide standards. But Train did not reveal at that time that the report presents a devastating indictment of the efforts by U.S. auto makers to meet the 0.4-grams-per-mile limit on emissions of NO_x, a limit that has been contained in federal law since 1970, and which they are legally required to meet by 1978.

The EPA scientists told Train in the re-

Continued on page 38

New Crisis in the Redwoods

Devastating clear-cut logging continues around the periphery of Redwood National Park in northern California, even as evidence mounts that such logging threatens the survival of major portions of the park, including the Tall Trees Grove. Recognizing the extremely critical situation, Congressmen Phillip Burton and John Burton (joined by 20 congressmen representing almost as many states and territories) have introduced legislation to gain the protection that is essential for the future of the Redwood National Park and its irreplaceable resources. H.R. 5193 would add approximately 73,500 acres to the present park. About 12,600 acres of this addition is old-growth forest. This fragmented old-growth acreage is all that remains in the Redwood Creek drainage around the present park.

The redwood industry has now nearly exhausted its resource of old-growth redwoods through excessive cutting on privately owned lands. If present trends continue, the old-growth industry will come to an end within 10 to 15 years and the Redwood Region will be faced with drastic changes in its economy. The industry is launching an all-out propaganda drive (reported to cost a half-million dollars) apparently to place the blame for this on the conservationists and the achievement of a Redwood National Park. Scare-tactic publications are flooding the Redwood Region and Congress to prevent any expansion of the park. Pressures to exempt logging from coverage by California's Environmental Quality Act are mounting in Sacramento. Anti-park sentiment from Redwood Region citizens (who recently felled two giant trees in the Ladybird Johnson Grove of the Redwood National Park) is being felt strongly in Washington, D.C. In turn, conservationists are launching a new campaign to assure the perpetuation of the great redwoods, along with a broader economic base for the beleaguered single-industry Redwood Region. National, all-out support for H.R. 5193 is a first and major step.

Edgar Wayburn, M.D.

Robert A. Irwin

observer / news of the members and their club

The Annual Meetings —Past and Present

THE SIERRA CLUB's annual organizational meeting, held in the austere setting of San Francisco's First Unitarian Church, contrasted sharply with the first such meeting I attended back in 1966. It was not merely the luxury-vs.-hard times atmospheres. It was something more—a contrast in spirit. Partisan politicking seemed more evident in the earlier proceedings. There was drama and excitement, of course, at that and other meetings in those days of the club's growing pains. Both have now been replaced by a new sense of responsibility and purpose, leavened with a refreshing openness and good humor.

The 1975 meeting was a *working* meeting of activist members from all parts of North America and Hawaii.

This by no means is intended to be a report of the 1975 proceedings. Your chapter's delegate to the Sierra Club Council will be reporting on those in your chapter newsletter. Full details of actions also will be available in the board and council minutes. I am limiting my "coverage" to a few significant, I hope, observations.

In Defense of "Circuses"

IT WAS A working meeting. Three days, not the usual two. A smorgasbord of workshops and committee meetings was served to council delegates Friday afternoon and evening. More workshops and rap sessions went on at special Saturday and Sunday breakfasts. These extras not only promoted liaison among delegates from all over the continent, but prepared them for more productive participation in the business sessions.

In the past, the club's weekend meetings have been called circuses, because so much was going on that no one possibly could watch all of the rings. The three-day schedule helps some. But no way is anyone able to attend meetings of the council and the executive committee of the board that are going on at the same time—as happened May 3rd. Some members have contended that such meetings are a waste of time and money. There used to be reason enough for such a judgment, and I always mumbled my assent to it. Now, however, I must voice my dissent. The May meeting convincingly demonstrated the value of face-to-face discussion in arriving at decisions that can keep the club on course.

A Council Resurgent

THE MOST DRAMATIC demonstration came on Saturday afternoon at the meeting of the council, which is largely responsible for club internal affairs. With the proliferation of chapters—now 46, to be 48 by July 1 with addition of the new DACOTAH (North and South Dakota) and WYOMING chapters—the council has become a bit unwieldy. It also is expensive to convene—with 48 percent of the club's members and 35 of its chapters outside California.

Under the Internal Organization Committee plan, the council's executive committee would be expanded from five to nine members, meet at least twice a year, and be vested with the council's decision-making authority. The full council would meet once a year, its delegates serving chiefly as information and education conduits between their individual chapters and the club. When the IOC presented that plan at an informal session Friday, there were a few questions on details. On the whole it seemed a sensible, well-thought-out proposal, one that would save money, and yet. . . . By the next day some doubts began to surface. Then, at the council session, **Murray Rosenthal** of the ANGELES CHAPTER rose and gave voice to those doubts. In effect, he said, the council would become powerless and useless, and die. Meeting only once a year, it could not even perform its liaison function. He maintained that, in spite of its bulk, the council did perform a valuable service by reflecting the interests of chapters and their members, that providing an open forum for the club was a high-priority budget item, and that the IOC plan would tend to break the club apart into sectional satrapies.

The upshot: After long and sometimes heated discussion, the council sent the report back to the IOC, instructing it to provide for at least three full council meetings a year and to maintain the full council's veto power over nonroutine executive committee decisions.

And the Lesson

THE FIRST TANGIBLE result of the council's resurgence may have been the board of directors' later decision to schedule a full council and board meeting in October in St.Louis. One certain result is that the council, by its own performance, clearly showed the club's real need for a vigorous forum, for a council that can act wisely and responsibly to assure the members and chapters an effective voice in the affairs of their club.

BULLETIN BOARD

Good-bye, Tower

By about November 1, we are going to have to give up an old habit: calling club headquarters "the Tower." After eight years at 220 Bush Street, in the heart of San Francisco's financial district, the Sierra Club will move up the street three blocks to number 530 on the edge of Chinatown. The building, a long-abandoned power substation, is now being remodeled. The new quarters will provide for the efficient operation of all departments of the club under one roof. But what to call the new headquarters?

People

The HAWAII CHAPTER has established a memorial fund to help carry on the work of **Geraldine Cline,** 23, who died in an auto crash February 8, 1975. Geri had pioneered the chapter's service trip program for young people. Interest from the fund will enable young Hawaiians to take part in the program. Gifts may be sent to the HAWAII CHAPTER office or to the Sierra Club Foundation, c/o Willis Moore, Bishop Museum, Honolulu 96818.

Ken McClaugherty of the LONE STAR CHAPTER has a project going to put mountaineering and related books on tape for blind persons. He needs help—tapes, readers, books, money. Write him at Box 496, Pleasanton, Texas 78064.

COST INDEXING (*Cont. from page 20*)

view process, the AEC Environmental Project Manager (EPM) arrives from Washington, D.C., accompanied (or followed soon after) by AEC lawyers. They sit around the conference table with the team leader and go through the preliminary draft word by word. Occasionally, a team member who wrote a particular section is called in to clarify or justify some statement. A treatise could be written on this particular period in the history of an impact statement; suffice it to say that the hot collars developed during the internal review process are nothing compared to the heat engendered during discussions between scientists and lawyers. There are scientists who can talk to lawyers, and there are lawyers who can talk to scientists. These are precious types and should be cultivated. But there are also scientists and lawyers who have no meeting ground except the floor they are standing on. The controversial point may simply be the use of the word "may" rather than "will," or it can be more substantial, such as whether or not the utility should be required to decrease its water-intake velocity. Quite often, the biologist overlooks the fact that any additional expense on the part of the utility will be passed on to the consumer; on the other hand, the lawyer seems more concerned with fulfilling the letter of the law, rather than its intent. In either case, since the final document is a legal one, to be used in an adversary-type hearing, conducted by lawyers, the final decision on a controversial point rests with the lawyers and the EPM. If the scientist wishes to carry the argument higher up, he can refer the problem to the AEC branch chief, who, in my experience, is usually more flexible than the EPM. The arguments are given some consideration by the branch chief, but because strong, supporting data are often lacking, he usually agrees with his EPM and the lawyers. The scientist returns to his cubicle frustrated at the whole bureaucratic process and wonders why he was hired at all. "Let the lawyers write the statements!!" Then he cools off and shudders to think what would happen if lawyers *did* write the statements, and is thankful that he had some small input. By the time the draft environmental statement (DES) is printed, the scientist is resigned to accepting that green-covered document as his own, except for the radiological impact and accident sections (these are prepared at AEC headquarters).

A 45-day period then follows, in which copies of the DES are sent to the utility, state and federal agencies, local libraries, and interested groups or individuals for comment. A technical staff at AEC headquarters also reviews the document. During this period, the individual writer makes his own corrections and changes to the DES. Here is one more chance for arguments to be expressed, hopefully with additional data. Comments from the outside begin to trickle in, and the team leader distributes them among his team members. The comments are studied and responses prepared. In my experience, the more substantial comments come from intervenor groups, the Department of the Interior, and the Environmental Protection Agency. The latter's comments, however, very often arrive *after* the comment period. The AEC's practice is to wait for EPA's comments regardless of time, but then insist on immediate responses from the team in order to meet a predetermined schedule. It is sometimes impossible to respond thoroughly to those comments under such conditions.

The team's responses to the comments are reviewed by the EPM, who makes changes or deletions as he sees fit. He may or may not consult with the particular team member before making such changes. All the comments and responses are then bound together with the modified draft statement, and the product published by the AEC as the blue-covered Final Environmental Impact Statement (FES).

The picture I have painted may not be representative of environmental-impact-statement writing as practiced by other government agencies, but I hope it gives some idea that human beings do exist behind those anonymous documents. Does an EIS do the job it was intended to do? We are trying to supply scientific answers, translated into legal language, to what are social and political questions. It is my opinion that our society has not yet reached the stage where these four facets of the human experience can function smoothly together. Perhaps the preparation of environmental impact statements, inadequate as they now are, is a step in that direction. ●

David Cavagnaro

When most of us were young, the garden walls enclosed a world of wonder. We explored the rosebud forest, rivers from the garden hose, creatures of the shade. With curiosity and love, we made this tamed backyard...

A Child's Wilderness

T. H. WATKINS

I SHARE MY WORKROOM with a spider. She is no spectacular beast, just a plain brown spider who has strung a rather undistinguished web across one corner of the window above my typewriter. Our working relationship is quite amicable. I catch words, she catches flies and an occasional moth. Sometimes, when the words evade me, I watch her going about her business, and there are times when she appears to watch me, too, standing at the lip of her funnel-home, seeming to stare across the two feet between us. If spiders think, I wonder, what does this quiet roommate think of the great, hairy creature *she* sees? Or can she even see me? Am I simply so huge to her that she can only sense my presence like a shadow on her world?

These are the sort of questions a child might ask. They are, in fact, the sort of questions I spent much of my childhood asking—of spiders, ants, and bees; of ant-lions, pinchbugs, and butterflies; of garter snakes and gophers. Like my workroom spider, they were all perfectly ordinary creatures living in a perfectly ordinary environment, in this case a vacant lot next to my home. Yet to me they were quite as enthralling as if they had been ocelots and anacondas, and my vacant lot was as exotic as any jungle. Hunkered down, sometimes flat on my belly, I entered the world of inches in that place, becoming one with the impossible journey of an ant over a sea of grass, with the tiny, rapid, frantic feeding of a caterpillar, with the geometry of a spider's slow architecture. And there I learned some things that were as important, I think, as anything I have learned since.

Of death. It was no gentle world, that world of inches, but one filled with all the mindless savagery of existence. There were always the patient death watches of the spiders, of course, but even more fascinating to me were the ant-lions sitting at the bottom of their half-inch pits, their fat little bodies hidden in sand, waiting for something to stumble over the edge and skitter down to be pounced upon and dragged into a miniature dark. And then there were the splendid wars of the ants, big, black ants and smaller yet incredibly durable red ants. Once or twice each summer I would witness one of these spectacles, seemingly as complex and deadly as any war between the countries of men, and possibly quite as senseless. The black ants were always the invaders, but the red ants were always the victors, making up in numbers and stubborn ferocity what they lacked in size. At battle's end, the little field would be littered with bodies and pieces of bodies in a tangle of death, but by the next day it would be policed as clean as any parade ground. Ready for the next time.

Of life. At the far end of my vacant lot there was a bank of morning-glory vines. I loved to sit beneath them in the very early morning, watching the pastel blossoms opening as the sun touched them, watching the thin vines twitching in the new light. They grew as I watched them, those vines, grew a millimeter at a time, cell being added to cell in a process I was sure I could see and knew that I could feel. They were *alive*—alive as I was alive, and as I watched them I could imagine my own small body growing in the same rhythm, stretching to meet the warmth of the morning.

Of time. One day, while studying the morning-glories, I felt something on my hand. It was a walking-stick, pale green to match the early summer grass, and it sat still on my palm for a long moment. All the ages seemed to be alive in this twiglike creature, and as I looked at it, not moving, not even breathing, I wondered hugely about time, about all the things I had learned vaguely from books, about fossils and dinosaur eggs and fish that walked, about creatures surely no more outlandish than this one, which seemed more plant than insect, whose astonishing form seemed to cross the border between what we know and what we can only guess. And then it was gone, disappearing into the grass of that secret green place as if it had vanished into time itself. I never saw one again.

Death, life, time. That small patch of ground gave me a sense of these at an age when they were large things to know, or at least suspect. I am a grown man, now, sitting in my workroom with a small brown spider. I have seen eagles and whales, antelopes and bears, and outside my windows at this moment I can watch pelicans and egrets and great blue herons. I have stood in a redwood forest, watched sunsets from a mountain, seen and touched the skull of a man who lived ten thousand years before me. My world has grown from one of inches to one of miles, and I have learned much. But I know that in only one place and at only one time was I privileged to feel the flowers grow and hold Forever in my hand.

T. H. Watkins is a frequent contributor to the Bulletin *and author of the new Sierra Club book,* The Lands No One Knows.

ELEANOR STIRLING

Eleanor Stirling lives in Colorado, where she works as a consultant for the Governor's Office on Human Resources and the District 10 Regional Planning Commission. She is a former newspaper editor, freelance writer, and history buff.

Courtesy the Anschutz Collection, Denver

"Rocky Mountain Waterfall"

Albert Bierstadt (1830–1902), born in Germany but reared in the United States, chose to return to Europe for his art education. He first traveled into the Western wilderness in 1859. With his career as a painter already launched, he received permission to join a government expedition as a civilian artist, achieving immediate fame with his massive canvases, which initiated the Rocky Mountain School. For many persons, especially those with European tastes, his work was an intense introduction to the splendors and scenic possibilities of the American wilderness. He generally managed to make the Rockies look like the Alps, and his rivers each a tributary of the Rhine, but his paintings were a kind of artistic propaganda that encouraged many Americans to seriously consider the esthetic worth of wilderness on a grand scale.

WILDERNESS AND AMERICAN ART

LET SCHOLARS AND POLITICIANS WRANGLE: wilderness will continue to defy precise definition because it is both a fact of geography and a state of mind. The word comes from an Anglo-Saxon root meaning "the place where wild beasts live," but the concept must go back to the earliest human settlements. Wilderness began at the edge of the clearing and extended to the limits of the human imagination. It was not only inhabited by wild beasts, but animated by the fears of people whose grip on life was uncertain.

For most of history, wilderness was perceived as evil—the "howling wasteland" of the Old Testament, for example—because it was, in fact, a place of danger and death. That saints and mystics regarded it also as a place of purification was incidental to the repugnance it inspired in mankind as a whole. The idea that it was valuable, indeed essential to the human spirit, became possible only when it ceased to seem threatening. It is no accident that the intellectual roots of wilderness preservation lie in domesticated 18th century Europe, where wilderness had been unknown for centuries, or that their refinement and application first occurred in 19th century America, where, for the first time, wilderness was viewed as an opportunity. The first colonists in America brought with them the Christian's traditional distaste for the wilderness of the devil, and fancied that God had set them in its midst as a test of faith. Wilderness, like sin itself, was something to be overcome. A century later, their descendants would still see the wilderness as something to be conquered, but as a test of mettle rather than faith. The ordeal of the parents had become the opportunity of the children.

But to those early-19th century Americans looking beyond the fringes of their civilization, entry into the wilderness across the Mississippi and Missouri rivers was viewed with ambivalence. On the one hand, the rich lands invited exploration and settlement; on the other, they were clearly dangerous places where death assumed many guises. Yet Americans needed to believe they could break with the traditions and influences of the Old World; ultimately, wilderness would be their means. Indeed, even before the 19th century had closed, historian Frederick Jackson Turner, in the famous thesis that revolutionized the study of American history, could look back and conclude that the greatest single factor influencing the distinctive development of society in the United States was the American wilderness frontier, which released the frontiersman from European controls. Turner declared: ". . . the very fact of the wilderness appealed to men as a fair, blank page on which to write a new chapter in the story of man's struggle for a higher type of society."

But it is still a large step from the exploitive dreams of the American pioneer to the humanistic vision of John Muir. The bridge between them was built by men in the East—like Thoreau and Whitman—who laid the intellectual foundations for cherishing the American earth, and by men in the West—explorers, trappers, and surveyors—who brought back from their journey reports of a land worthy of such sentiments. Among these messengers from beyond the wide Missouri were a group of artist-adventurers, landscape painters in the grand Romantic tradition, who sought the sublime in the wilderness of the West, and primitive nobility, in its inhabitants.

Beginning in the late 18th century, a native school of American painters arose in the East. They sought self-education in the presence of poets and philosophers, and their theme—a uniquely American theme—in the land itself. Thomas Cole, celebrant of the American wilderness landscape of the East, broke with earlier art traditions and either omitted any sign of man and his influence from his canvases, or reduced human figures to minimal proportions in a landscape dominated by nature's works. Out of Cole's work grew the Hudson River School of American painters and from this, the Rocky Mountain School, a second generation of wilderness painters.

By 1806, Lewis and Clark had crossed the Rockies and reached the Pacific, exploring and charting much of the immense western lands. They were followed by a host of trappers, sportsmen, prospectors, scientists, world travelers, journalists, and perhaps most significant, military surveyors. From the beginning, many of these expeditions brought with them artists of greater and lesser fame and talent, whose work contributed philosophically and artistically to the growing national concept of wilderness. Depicting dramatic episodes in their field sketches, drawings, notebooks, journals, and paintings, they illustrated a variety of viewpoints and greatly affected the thinking of the most prominent and wealthy men and women of the era. But this would have been insufficient to move the will of the nation had not they reworked their basic wilderness themes in woodblocks, engravings, lithographs, and aquatints suitable for publication in books, magazines, newspapers, and "copies suitable for framing." In this way, they also reached the ordinary person of modest means and limited experience, and were thus instrumental in shaping the public attitudes that would allow the establishment of Yellowstone National Park even before the West was completely won. If their canvases strike us today as too idealized, too overtly sentimental, neither are we immune to their vision of a paradise somewhere in the West, where the wilderness of earth and spirit unite in perfect harmony.

Courtesy the Denver Art Museum

"Mandan Indians"

George Catlin (1796–1872) was a self-taught "primitive" who repudiated all sophisticated influences in his work. He dedicated himself to recording all he could about the Indians of the West, and his paintings of the Mandans, who were wiped out by small pox, constitute a uniquely valuable chronicle of this extinct people. He was a passionate spokesman for the Indian tribes of the Great Plains, whom he visited, lived with, and described so vividly in his paintings, books, and lecture tours in the United States and abroad.

"View of the Stone Walls of the Upper Missouri"

Karl Bodmer (1809–1893) was a Swiss draftsman and watercolorist who accompanied Prince Maximilian of Wied Neuwied on a tour of the United States that began in 1832. Sketches he produced during their trip up the Missouri River supplemented the publication of Maximilian's journal in London, and are considered today to represent the finest extant pictorial record of the Missouri frontier. "View of the Stone Walls—" is atypical; Bodmer preferred to depict, with his fine artistic training, active scenes of frontier life at the river crossings, forts, and settlements. He was exceptionally prolific, and his work, published as engravings, was highly regarded. But in the spring of 1834 he returned to Europe forever, his American odyssey ended.

Courtesy the Anschutz Collection, Denver

"Yosemite Valley"

Thomas Hill (1829–1908) emigrated from England to the United States in 1840. His early success was as a portrait and historical painter, but when he moved to San Francisco and joined the fast-growing art colony there, he began painting the magnificent wilderness landscapes for which he became famous. Known principally for his many views of the Yosemite Valley, he also painted at the Grand Canyon, Yellowstone, Donner Lake, and the Sierra. His prize-winning canvases, widely exhibited during his lifetime, were temporarily out of fashion, but have recently regained their former popularity.

Courtesy the Denver Public Library

Courtesy Harmsen's Collection of Western Art

"Kidnapped"

John Mix Stanley (1814–1872), one of the most widely traveled of the wilderness artists, was born in New York and began his career as a humble sign painter and itinerant artist whose specialty was Indian life. To modern eyes his paintings may seem both comic and embarrassing, depending, as so many of them do, on the theme of the "menaced white woman and child," but his Indian Gallery was enormously popular in Eastern cities, and more than 150 of his paintings hung in the Smithsonian where, ironically, while the government was deliberating their purchase, all but five were destroyed by fire.

Courtesy the Denver Art Museum

"Clouds in the Canyon"

Thomas Moran (1837-1926), English-born, but brought to the United States as a child, was largely self-taught as an artist and worked for a wood engraver to support himself while he experimented with pencil, charcoal, ink, and watercolor before turning to oils. After poorly illustrating a magazine on Yellowstone in 1871, he seized the opportunity to travel west with the Hayden Geological Surveys, and his successful series of sketches, watercolors, and paintings were among those that influenced Congress to set aside the Yellowstone as the nation's first national park.

Courtesy the Denver Art Museum

"Herd of Buffalo"

William Jacob Hays (1830–1875), born in New York, was an animal painter whose work is little known today, but in his prime, from 1855 to 1875, he earned considerable recognition as an artist and naturalist. He occasionally published papers in professional scientific journals and was deeply influenced by Audubon. He was also known for getting into ferocious battles with art critics over the shape and dimensions of such things as a bison hump.

Courtesy Harmsen's Collection of Western Art

Charles Lanman was an editor, librarian, essayist, and landscape painter. During the 1830's, he traveled extensively through the remaining wilderness of the eastern United States, recording his impressions in a series of high-flown essays and romantic paintings. Lanman's attitude toward wilderness was ambivalent, being a blend of the old and the new. He could, in almost the same breath, praise it for its primitive beauty and curse it as a place of evil and danger.

"View of Mt. Hood"
W. W. Armstrong (1822–1914) was born in Ireland, trained abroad as a civil engineer, and emigrated to Canada in 1851. Commissioned to do a series of paintings by the Toronto City Council, which were later published as popular lithographs, Armstrong became familiar to both Canadians and Americans. He began seriously painting wilderness landscapes when he was appointed to the military staff that put down the Red River Rebellion in 1870–1871. He was known as a painter of both Indians and wilderness and was extremely popular in Britain and eastern Canada as a delineator of the American scene.

Courtesy the Anschutz Collection, Denver

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port that "testing of systems targeted toward the . . . 0.4 NO_x level has virtually ceased. . . . The report team's analysis of the development programs actually targeted toward 0.4 gm NO_x leads us to conclude that manufacturers must believe they will not have to meet 0.4 NO_x in 1978, if ever." They pointed out that American Motors had yet to run the first test on its proposed 1978 NO_x control system; that Chrysler had run a few tests, with many key components of its proposed system missing. Ford Motor Company has been insisting that a 500 percent relaxation in the NO_x standard to 2.0 grams/mile would be necessary for the company to market its proposed stratified-charge (CVCC) engine modeled after the design currently available from Honda. The EPA scientists, however, pointed out that, although Honda has repeatedly reported test results under 0.4 grams, Ford had made no attempt to recalibrate its engines to get the same results. In fact, the scientists contended, Ford was deliberately delaying further progress on the CVCC engine for fear that success in developing the technology would weaken the case for relaxation of the standards.

General Motors, the largest of the companies, has the biggest program. But whereas the company conducted durability tests in 1972 on 13 dual-catalyst cars designed to meet the 1978 standard, its level of effort in 1973 fell to only *one* such vehicle.

In a letter to Train, Sierra Club Executive Director Michael McCloskey described the report as "an astonishing indictment" of the industry's efforts. He urged Train to warn the industry now that he will not be able to grant further extensions of the NO_x deadline, even if authorized by the Congress, if the industry continues its present level of effort, and to support provisions of the pending Brown-Ottinger Clean Air Act of 1975 establishing excess-emission penalties for auto makers who fail to meet the 1978 deadlines, even if an extension has to be granted because they fail to come up with the technology.

A sweet if unintentional victory in the battle to curb log exports

When Congress recently passed the Tax Reduction Act, it unintentionally doubled the taxes on the exportation of domestic timber. The act repealed tax benefits for all products entitled to them under Section 611 of the Internal Revenue Code. Before this, log exporters were permitted to postpone indefinitely income taxes on 50 percent of their gross revenues. Environmentalists, independent forest industries, and some labor unions had been trying for some time to reduce log exports significantly.

Wilderness park proposed for Ontario's Missinaibi

The Sierra Club of Ontario (Canada) recently proposed a 260-mile wild river park on the Missinaibi River between Lake Superior and James Bay. Club Chairman Richard Symns said he was encouraged by early government response from the Natural Resources Ministry, which apparently already had its eye on the Missinaibi. "We've been interested and done some work there," said Parks Branch Director J. W. Keenan. "The Sierra Club obviously has done a lot of work and made a comprehensive proposal. They are not being wild-eyed about it."

The club's proposal quotes the government's own outdoor recreation survey to emphasize potential use of such a park. It points to the historical significance of the river as one of the main arteries of the fur trade, and to the fact that the Missinaibi affords virtually the last chance to establish an unspoiled wild river park within easy reach of southern Ontario's urban centers. One club member, an ardent river enthusiast, said: "Almost every other river I have been on was despoiled. You keep wondering whether your children will have the chance to use an unspoiled river."

Loggers already have their eyes on the Missinaibi, and Ontario Hydro has plans for a dam that would drown one of the most spectacular parts of the river and cause irreparable damage to downstream ecosystems while providing only .003 percent of Ontario's 1973 electricity supply! The proposed 260-mile park would increase by more than 50 percent some 500 stream-miles of wild river parks in five areas already designated by Ontario. An informational brochure entitled "The Missinaibi: A Wild River Park Proposal," by the Sierra Club of Ontario, as well as additional information, are available from: The Missinaibi River Project, Sierra Club of Ontario, 47 Colborne Street, Suite 308, Toronto, M5E 1E3 CANADA.

Sierra Club supports corporate disclosure

The quandary of how to get better information about corporate activities that may have a detrimental effect on the environment, and with it some idea of how to control these activities, has been of long-standing interest to the club. Recently, as the result of a lawsuit brought by the National Resources Defense Council, a small crack was opened in the door of corporate secrecy by the Securities and Exchange Commission (SEC), which scheduled hearings on possible modification of corporate-disclosure rules.

In a statement presented to an SEC hearing in Washington, D.C., club Executive Director Michael McCloskey supported new requirements for greater disclosure of environmentally relevant activities of U.S. corporations. "There is a great information gap between the self-serving claims of some companies, who contend they are doing a model job, and the outright defiance of other companies, who constantly rail against the idea of complying with environmental laws. Investors—and consumers too—need some way of obtaining concise information about the environmental record of major companies."

McCloskey suggested greater annual disclosure of information about (1) investment in pollution-control technology, (2) tonnage of uncontrolled effluents and emissions, (3) money spent on environmental research, (4) energy consumption, (5) percentage of natural resources inventory used or sold, (6) investment in rehabilitating development sites, and (7) toxic substances produced. The SEC is now studying the hearing record, and perhaps, new regulations will be forthcoming. ●

[redacted]ierra Club Membership.

NOT JUST THE MOUNTAINS...

. . . but your chance to explore the whole splendid world around you—your chance to help in our efforts to keep it splendid—and alive.

OUTINGS: From peaks in Alaska and Asia to nearby museums, the Sierra Club and its forty-eight local chapters sponsor trips literally by the thousands.

WILDERNESS SKILLS: Instruction in rock climbing . . . winter camping . . . river touring . . . nature photography. These and others are offered by many chapters of the Sierra Club.

INNER-CITY OUTINGS: City children sometimes ask what the "environment" has to do with them. These special Sierra Club outings take just those inner-city children to places they will never forget.

CLEANUP TRIPS: Trash in the wilderness, litter in the neighborhood park . . . Sierra Club groups help clean it up and haul it out—and have fun at it, as well.

AND THE ISSUES:

STRIPMINING. President Ford has just vetoed a compromise bill which would make stripminers restore the land they have disrupted. Congress will try to override. Whatever happens, the fight will continue.

YOSEMITE. The resolution of the "MCA Affair" will have important implications for every national park. Our efforts here have opened a new door for public participation in planning for our parks.

WHALES. The debate continues. So does the slaughter of some of the most marvelous—and most intelligent—creatures that have ever lived on earth.

WILDERNESS. Right now, just over one-half of one percent of America's land is in protected wilderness areas. A pretty small beginning. But the National Wilderness Preservation System could grow considerably this year—with your support.

BUREAU OF LAND MANAGEMENT. This little-known federal agency controls about 170 million acres of spectacular land in the American West, and much more in Alaska. The Bureau wants Congress to pass an Organic Act to give it the management power it needs. We agree—but we think the Act should also reverse some outmoded BLM policies.

ENERGY. Industry says we must sacrifice anything, everything, to hasten "energy independence." The Sierra Club disagrees. We propose a balanced energy plan—cut down on energy wastes, and find new energy sources which our environment can afford.

LAND-USE PLANNING. Behind the many crises of the moment, there is a basic question . . . "How can we use our land without destroying it, so it will continue serving our needs in the future?" A bill now in Congress would be a first step.

If you aren't a member of the Sierra Club, we invite you to join us. If you're already a member, perhaps you would like to give a membership to a friend. Either way, an application blank is provided at left for your convenience.

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