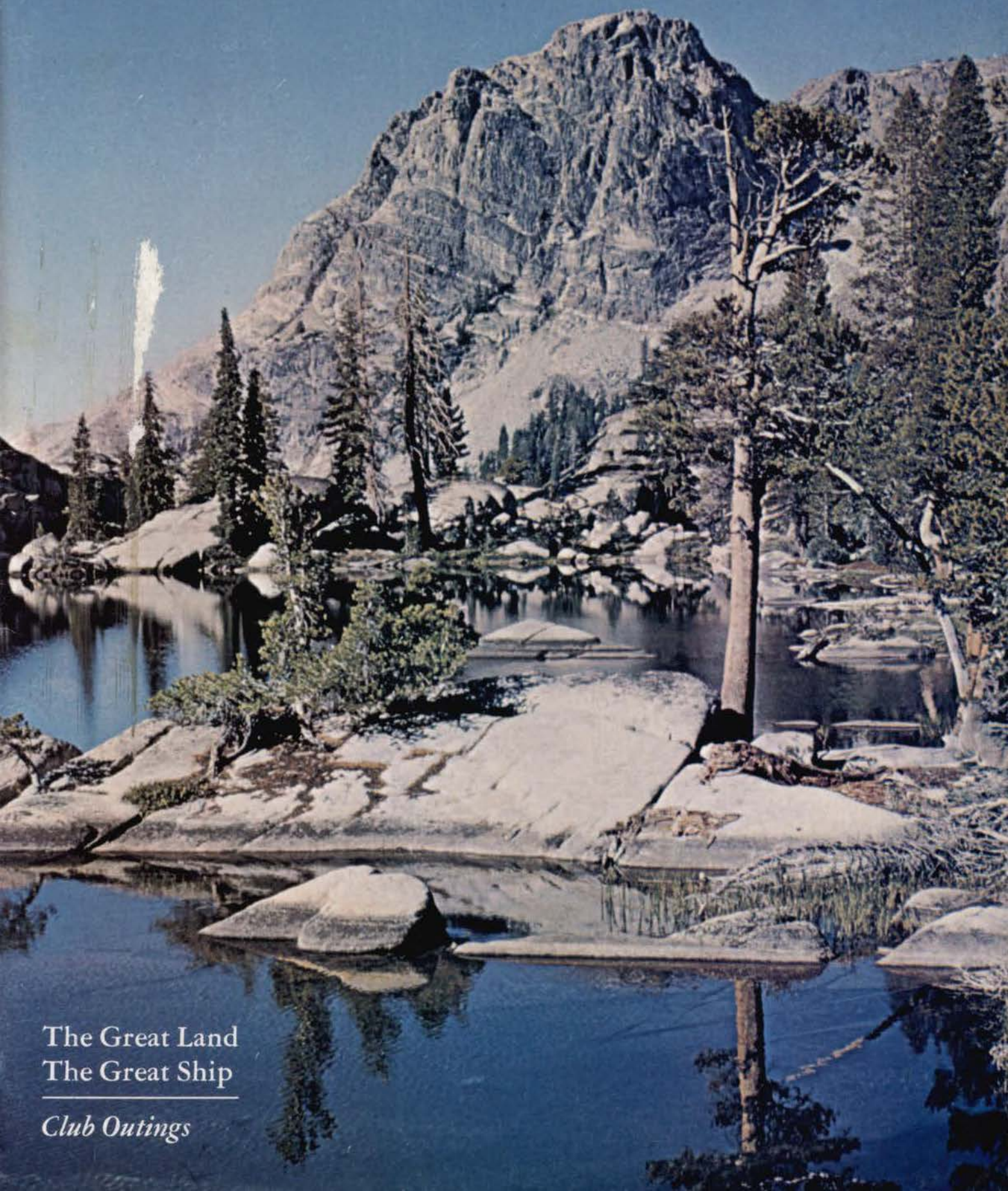


Sierra Club Bulletin

JUNE 1973



The Great Land
The Great Ship

Club Outings



Hut Hopping in the Austrian Alps

Hut Hopping in the Austrian Alps is a new Sierra Club Totebook by William E. Reifsnyder.

It's the first up-to-date English language guide to the Alpine trails and huts of Austria, by a Connecticut Yankee who has been there with notebook and camera.

It's for hikers who have seen America first, for those planning summer trips to the Alps, for anyone who has been wondering how the Europeans use their mountains without loving them to death.

There is, in this book, an important ecological lesson. As Reifsnyder describes it: "Even though Alpine trails receive very heavy use, the impact of the hiker is minimal. He does not pitch a tent, build a fireplace, gather wood, trample the earth around his campsite, leave his debris. The impact is concentrated at the huts, where it can be dealt with adequately. As a result, although many parts of the Alps are more heavily used than sections of the Sierra, the visible impact of man's recreational use is less."

But there is even more. Reifsnyder describes everything you need to know in planning a hut-hopping trip through the Austrian Alps: how to get there, what to expect in accommodations, what to wear, how to decipher the monetary system, how to read menus. Thus prepared, the reader may then select one of three week-long rambles through the Stubai, Lechtaler or Tauern Alps of Austria. Each tour is described in one-day units, from hut to hut, and each unit is illustrated by photographs and a trail-map keyed to an elevation scale. A unique introduction to one of the world's most beautiful mountain regions.

Hut Hopping in the Austrian Alps.

224 pages. With more than 30 photographs by the author. \$3.40.

Add state sales tax: California 5%; in Alameda, Contra Costa and San Francisco counties 5½%; New Jersey 5%; New York 7%.

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Pages 4, 5, and 8: Edgar Wayburn; pages 10 and 12 (top): Joan Parker; page 15: Brian Blade; page 17: Martin Litton; page 18: Steve Johnson; pages 24 and 25: Peggy Wayburn.



Cover: Clear waters and high peaks, such as those in Betty McCracken's photograph of 9,000-foot Seavey Pass in Yosemite's North Boundary Country, await participants in the Sierra Club's wilderness outings.

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

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ALASKA—

The Great Land



America's Last Legacy

PEGGY AND EDGAR WAYBURN

WHEN SECRETARY OF STATE William H. Seward purchased Alaska from Russia for \$7,200,000, most Americans took a dim view of the transaction. The year was 1867, and Alaska was largely unmapped, unexplored, and generally unknown. It was widely believed to be a vast snowbound wasteland, worthless, and barren of life—except for a few polar bears, walruses, and aborigines who lived in igloos. “Seward’s Icebox” was a popular name for the new territory, or “Icebergia,” “Walrussia,” or more unkindly, “Seward’s Folly.”

Seward, however, knew better. He considered the acquisition of Alaska the crowning achievement of his career. He also recognized that it would take a long time for people to wake up to the fact. They have awakened, and 101 years after his death Alaska is seen to be one of the most valuable pieces of real estate in the world, coveted by some of America’s most powerful economic interests, and the center of one of the great conservation battles of all time. Yet, one century later, Alaska is still largely wilderness, still relatively unknown and misunderstood, with few people being aware of what is now at stake in the Great Land.

It has always been difficult to describe Alaska, to convey the prodigious scale, variety, and beauty of the place. To begin with, there is the simple matter of size. Alaska has 365 million acres of land: to see them all would require visiting a million acres a day for a full year. To explore all 34,000 miles of its coastline would call for examining some 95 miles of shoreline every day throughout another year-long expedition. One Alaskan glacier—the Malaspina—is by itself larger than the state of Rhode Island.

The relief of the Alaskan landscape is equally awesome. About a third of the terrain is nearly flat and situated at low elevations. (One earthquake fault zone, the Chatham Trough, actually cleaves the land mass to a depth of 2,900 feet below sea level.) Across this gently tilted country even the greatest rivers slow down and loop in wild meanders, winding their sinuous pathways through tundra or muskeg where, in summer, thousands of thaw lakes shine in the perpetual sun. The rest of Alaska is mountains—sky-filling, thunderous, often snow-gleaming mountains, with many peaks lifting from 10,000 to 20,000 feet to form some of the earth’s most gorgeous scenery.

Gathering water from these mountains—and incidentally making a paradise for canoers and kayakers—is a network of spectacular rivers. Many are major rivers by any standard, but the greatest of them is the Yukon. Rising in Canada, it gathers water from the Brooks and Alaskan Ranges and all the mountains in between, and swings



At the left, Lake Minchumina warms to the late season sun. These flatlands north of Mount McKinley National Park are a part of the habitat of important species that range the park. Above, pipe for the trans-Alaska rusts in Valdez. The site of the pipe storage was not long before an area of historic buildings burned by the city fathers as “unsafe.”

Peggy Wayburn is author of the Sierra Club’s recent publication: Edge of Life—the World of the Estuary. Edgar Wayburn, as Club President in 1967, initiated the Club’s efforts on behalf of Alaska.

1,400 miles through the state to meet the Kuskokwim. Together they form one of the world's greatest deltaic wetlands, where the skies are darkened in the spring and fall by millions of migratory wildfowl.

The Alaskan climate matches the scenery in scale and variety. Despite persistent legend, it is not a land of perpetual ice and snow, but north of the Pacific Coastal area it has a "frost climate"—*i.e.*, the average annual temperature is generally below freezing, and large areas of land are underlain by permafrost, or perpetually frozen ground. On the Arctic slope, precipitation is scanty (an average of some four inches per year near Point Barrow), summer days can be mild, but winters are bitter, with minus 50 degree temperatures and winds that drive the snow like sandblasting machines.

By contrast, southeast Alaska is one of the wettest, lushest areas on the North American continent, with the Pacific Ocean washing its warm currents into the Gulf of Alaska and the Inside Passage, and moisture-laden winds encountering a high mountain wall along the shore. Precipitation is spectacular—an average of 220 inches of rain per year drenches parts of Baranof Islands. Juneau—with temperatures comparable to Chicago's—gets soaked with nearly 90 inches. At higher altitudes, the rain becomes snow and feeds the vast ice fields and glaciers of the Pacific Mountain system.

In the interior of Alaska, the moderating influence of the oceans is missing and, as a result, the extremes of temperature are phenomenal. In summer the inhabitants of Fairbanks, the state's second largest metropolis with 31,220 people, often swelter in 90—or even 100—degree heatwaves. But winters here are among the coldest on the North American continent. With the thermometer at minus 60 degrees, even the smog freezes.

Although a good part of Alaska was considered lifeless in Seward's time, the plant life, including the beautiful tapestry of the tundra along with the heavy forests of the southeast, is abundant and well adapted to the extremes of climate and weather. Much of the magnificent wildlife has evolved to take advantage of the great open spaces as well as the food supply. The caribou, for instance, which feed on the tundra's lichen, require large

quantities of browse, and must have a vast range if they are to survive as they now exist. The prodigious wetlands of the interior support much of the migratory wildfowl of the North American continent.

With all its varied splendor, wild Alaska is a marvelous place to visit and linger in—but not an easy place in which to live. It takes a particular quality of spirit to endure the unrelenting cold of the winters, the pure and powerful presence of the persistent snowy darkness, with the blue-black arch of sky stabbed and scorched by the northern lights. It requires physical strength as well, a healthy body, powerful will, and stamina simply to get around the place—let alone wrest a living from it. Yet people have been living in Alaska for thousands of years. Bands of nomads came across the Bering Strait when the land bridge linked this continent to Eurasia. Among those who traveled this way, four groups with different languages and cultures made their peace with the land they found. The Eskimos, a coastal people and skilled hunters of the caribou, moved to the north and east along the shore, setting up winter and summer camps as they followed their game, and gathering berries in the waning summer days. The Aleuts, a similar people turned southward on their trek. They made their homes along the shores and lakes, and named the place they lived Alaska, the Great Land. Remnants of their early culture are sealed away in the sifts of volcanic ash which have repeatedly blanketed the Katmai territory. Traveling farther to the south, the Haidas and Klingits flourished along the forested shores, finding a bounteous food supply in the sea. In an easier climate and with more plentiful leisure time, they developed a sophisticated culture and unique art forms. The fourth group, the Athabascans, went inland; some crossed the continent, others filtered into the central United States to become the progenitors of the Apaches and Navajos; and still others stayed along the banks of the great rivers they traveled, the Yukon and the Porcupine among them. They trapped fur-bearing animals, and smoked salmon for a staple food.

Until the coming of the white men, these people existed in relative balance with their environment. As hunters and fishermen, they took no

more than they needed, and there was nearly always enough to meet their needs. Although different in their ways, they shared certain customs and ideas: among these was their feeling about the land. They thought of the land as their hunting territory, not as their private property.

The white men, however, brought a different set of "philosophies, desires, and yearnings," as Richard Cooley phrases it. They came as explorers, for glory of country, and always in search of treasure. They believed that any land they found was theirs, together with anything on it or in it.

The first to claim and colonize the Great Land were the Russians. Arriving in the mid-eighteenth century, they moved along the shores, and from the Seward Peninsula south, they built their forts and then their churches. By the nineteenth century they had subdued the Haidas and were making Sitka the "Paris of the Pacific." And before many decades had passed, they had nearly exterminated the fur seal, the sea otter, and the Aleuts, whom they enslaved and infected with their diseases.

A century after their arrival, it was clear that they were overextended: Alaska was too far from St. Petersburg and was not a place to be easily tamed. By the time Seward was ready to buy Alaska, Russia was ready to sell. In consummating the deal, it seemed unimportant that the Natives signed no treaties relinquishing the right to the land that was their aboriginal home.

The acquisition of Alaska occurred at the onset of a floodtide of expansion into the American West. In 1867 construction of the transcontinental railroad was proceeding in earnest, and the giveaway of the public lands of the West was seen as the logical means of developing the country. But in Alaska the story was to start differently, for this new territory was specifically excluded from the land laws of the United States.

Not until the passage of the mining laws of 1884 was Alaska open to prospecting, and not until 1890 was it possible to homestead Alaskan land. (Tailored to fit the Midwest countryside, the requirements of the Homestead Act were ludicrously unsuited to Alaskan conditions. Few homesteaders, then or later, were able to "prove up" their land without federal assistance.) The Trade and Manufacturing Sites Act of 1891 offered 80 acres to

anyone setting up a business, but Alaska was hardly a businessman's paradise.

Under the circumstances, it is not surprising that there was no stampede to settle the new territory. In 1880, there were only 430 non-Natives out of a total population of 33,426. (Among them were some of the early missionaries and government emissaries bent on changing the ways of the Natives to conform to their own ideas.) It took the finding of gold to bring a major influx of "Cheekakos" into the Great Land. Tough, fearless, and avaricious, the miners swarmed through the interior and down the

administration of the Bureau of Sports Fisheries and Wildlife—a total of 19 million acres. In contrast, 27.4 million acres have been set aside for power purposes, principally for the Rampart Dam project, which would drown the Yukon Flats.

But establishment of national parks, not only the country's largest but easily the most exciting, did not attract much attention or visitation. It was still too hard to get around in Alaska, or even to get there, although the days of the bush pilot were at hand. Until World War II, Alaska went its lonely, essentially unspoiled way, its Native population seeming to

of arctic landscape, and with an enduring network of caterpillar tracks on the tundra.

Alaska's population and economy soared. In the two decades following 1940, the population tripled, with military personnel and their dependents accounting for over a fourth of the total. When Alaska achieved statehood in 1958—after decades of local effort—her population stood at nearly 230,000. By then, however, the military boom was going bust, and the new state had a perilously narrow economic base. The cutting of the southeast forests had got under way in earnest during the '50s. Gas and oil explorations in the Cook Inlet had begun to pay off. (Oil had been detected on the North Slope in seeps as early as 1903, and the Navy's 1923 Pet 4 Reserve was further testimony to its presence there, but only explorations were going on in the Arctic regions.) Although tourism was becoming an increasingly lucrative business, the withdrawal of military economic infusion left the unemployment rate high and still rising.

Aware of Alaska's economic problems—as well as its potentials—Congress wrote the Alaska Statehood Law with a lavish hand, and set into motion the second carving up of Alaskan land. In 1958, about .2 percent of Alaskan territory was in private hands; about 25 percent, or 92 million acres, had been reserved by the federal government. The remaining 75 percent, some 271.8 million acres, was considered "vacant, unappropriated, and unreserved" public domain. From this, the state was given the right to "select" for its own some 103.6 million acres, an area greater than the entire state of California. Another 400,000 state acres were to come from U.S. Forest Service lands. Full title to the fabulous Alaskan tidelands—another 35 million to 45 million acres—swelled the total of the new state's lands to nearly 150 million acres. This enormous grant, larger than the combined federal land grants to all 17 western states, was an unprecedented dowry. Tying off the package were two big bows: the title to all minerals in state-selected lands would remain with the state; thus Alaska leases—but does not sell—the rights to the oil, gas, phosphate, coal, etc. found in state lands. And, in contradistinction to all other states, Alaska receives 90 percent of the *federal*

As the legislation that would permit construction of the trans-Alaska pipeline nears a vote in the Senate, and as the debate over the disposition of Alaskan lands grows more intense, it seems appropriate to pause for a moment to review the past and reflect on the future of the Great Land.

Yukon, performing prodigious feats in their search for treasure. They dragged their iron stoves across the icecaps, nailed together shaky craft and traveled the wild rivers in hair-raising voyages, and grappled with grizzlies—they sometimes lost and sometimes won. They left a colorful and violent history—and to the Natives the legacy of another white man's disease, alcoholism. Most of them went on when the gold was gone, but some stayed. And by 1910, there were 39,025 new Alaskans, while the native population had shrunk to 25,331.

Although a few mining and homestead claims were scattered across the face of Alaska in the early twentieth century, the federal government had virtually free choice when it initiated its division of the Alaskan land. First to be set aside from public entry were nearly 21 million acres of forested land in the southeast: 16 million went into the Tongass Forest, the rest into the Chugach. Subsequent withdrawals went on as the century progressed: 7 million acres of land of "most unusual natural beauty" (an arbitrary choice, many would say) went into three National Park System units, in two of which mining was allowed. More or less extensive tracts came under the

endure docilely the classic demands of colonialism, and the slow destruction of their way of life. There was not much employment in Alaska except trapping, fishing, prospecting—or working for the government. The federal government, of course, was the principal economic contributor to the territory, even to funding the remarkable experiment of transplanting dust-bowl farmers to the Matanuska Valley in the mid-thirties.

World War II had an incalculable effect on this vast land, which had only 75,524 people in 1940. Because of its strategic location (the Aleutian chain stops just 1,000 miles short of Japan, the Seward Peninsula just 56 miles from Russia), the military practically seized Alaska. They poured billions of dollars—and billions of yards of concrete—into the Great Land. Roads, airfields, military bases, housing, office buildings (including a 15-story structure in the middle of nowhere), and other military facilities were constructed where wilderness had been before. Along with launching a building boom, the military began detailed mapping of the terrain and more thorough geological explorations, which resulted in the littering of oil barrels over millions of acres



16,523-foot Mt. Blackburn crowns the spectacular Wrangells, adjacent to Canada's Kluane Park.

revenues from mineral leasing on public domain lands within its boundaries. As Richard Cooley writes with considerable understatement: "Congress has indeed been generous with Alaska."

Not the least of the gifts proffered Alaska was the rare chance to pioneer in new approaches to its land use and development, to build into the exploitation of the land some measure of protection and understanding. But Alaskans were too deeply steeped in the earlier pioneer tradition of taking what they could get and looking to strike it rich. Washington remained the single largest economic contributor and, in 1965 alone, poured a half-billion dollars into the state. This money, like all the rest that has so long supported Alaska came, of course, from the pockets of the American taxpayer.

The establishment of statehood had unforeseen consequences. It brought to sharp and painful attention certain social problems and an oversight for which the federal government would pay dearly. Since the coming of the white man, the Alaskan Natives—like the other aboriginal Americans—had been treated as a sub-race, and the United States had compounded the treatment. From 1867 on, there had been two de facto populations in Alaska, one "Native," the other "non-Native." Although they lived in the same state, they may as well have in-

habited two different worlds. The Bureau of Indian Affairs controlled the life of the Natives, ostensibly educating them to take their place in white society. But the white society had no place for them.

When Congress passed the statehood act, it occurred to no one to consult the natives about the "vacant and unappropriated" public domain from which the state would select. It did occur to the Natives, however, for some of the first state selections took territory which had traditionally been their hunting grounds. Since the Natives had never formally relinquished their rights to any of Alaska, they found themselves on firm legal ground when they began to press their claims—claims which Congress had ignored for a century.

By the early '60's, the Alaskan Natives were proving that they had learned the white man's lessons unexpectedly well. Not only had they lost their culture, but some of their innocence as well. Now when they asked for their rights, they did what the BIA had taught them: although theirs was traditionally a hunting society in which no man owned the land, they asked for land—and money. The Haidas settled for a government offer early in the game. But the demands of the Eskimos, Aleuts, and Athabascans—who set aside their traditional internal differences to form the Alaskan Federation of Natives in 1966—were

considered too high. In 1965, the AFN claimed 125 million acres as their "public domain," and by 1969, the figure had risen to 300 million acres. It was from these acres that they wished to make their own "selections." In December, 1966, Secretary of the Interior Stewart Udall reacted by instituting a "freeze" on all Alaskan lands, halting homesteading as well as federal withdrawals and state selections pending settlement of the Native claims.

Meantime, conservationists were beginning to find Alaska and explore the last great wilderness of the United States. What they saw both excited and appalled them: Alaska was clearly the country's greatest scenic and wildlife resource, and it was in danger of being exploited with the same carelessness, profligacy, and destruction accorded the West a hundred years ago.

Into this complex situation, already loaded with potential—as well as active—conflicts, the news of a major oil strike at Prudhoe Bay flared like a rocket in the summer of 1968. It set off a variety of reactions, from wild jubilation to profound apprehension. The state saw Prudhoe Bay as the answer to its economic woes. Alaskans saw it as the long-awaited chance to get rich. The oil interests saw it as a bonanza. The Natives viewed it as a further challenge to their rights. And conservationists saw it as a major threat of destruction to the Great Land.

As the smoke began to clear, three facts stood out with great clarity: with a couple of notable exceptions, everyone assumed *a priori* that a pipeline must be built to get the oil out immediately; the conservationists and the Natives were the notable exceptions; and, lastly, Alaska was up for final grabs.

The oil industry promptly formed a consortium to launch TAPS—the trans-Alaskan pipeline system. Obtaining a special use permit from the Bureau of Land Management (despite the freeze), the consortium laid out the route of an 800-mile pipeline. Running from Prudhoe Bay to Valdez, it would be one of the largest single construction projects in the history of the world. It would breach the Brooks Range, cross hundreds of miles of permafrost, and pass through some of the most unstable earthquake country on earth. It would also imperil mil-

IT WAS SAD WHEN THE GREAT SHIP WENT DOWN

T. H. WATKINS

Speculation on the Million Ton Ship

American oil demands in 1985 are projected to require 2,600 tankers of 47,000-dwt (deadweight tons) equivalent or 500 vessels of 250,000-dwt equivalent. Only 125 million-ton tankers would be required to do the job. The efficiencies of this kind of an operation are the irresistible attraction of the million-ton ship. A lot has to come first, such as port and repair facilities, but these were the same obstacles that confronted the quarter-million-dwt ship. The answer to how soon the maritime industry will undertake the million-ton ship might be: sooner than you might expect. ■

Surveyor magazine, February 1973

World's Largest Ship Launched in Japan

TOKYO—Nov. 12, 1975 (AP)—Top officials gathered here today at the giant graving dock of the Ibitsu Industries shipyard to witness the launching of the largest ship ever built—the million-ton oil carrier *Colossus Maru*.

Emperor Hirohito, 75, emerged from a two-year seclusion to break a special, outsized bottle of California champagne across the prow of the mighty ship. "This is an historic day for Japanese industry," the aging ruler said as the enormous dock slowly began to fill with water. The size of the *Colossus Maru*—1,470 feet long, 255 feet wide, and 132 feet from keel to main deck—made it impossible to launch the ship in the usual manner.

Owned by the Colossus

Corporation, a consortium of international investors organized to build and operate the big tanker, the \$120-million *Colossus Maru* is leased to a group of American petroleum companies for the shipment of crude oil from the Persian Gulf to refineries in the United States.

Liberian Flagship

The Liberian-flag ship will be manned by only 32 highly trained crewmen hailing from more than a half-dozen of the world's leading maritime nations. Captain Paul C. Lindemeyer, an American with 14 years' experience in VLCCs (Very Large Crude Carriers), said of his appointment, "This is a great responsibility as well as a tremendous opportunity." *Continued*

Chris Ariapolous, the ebullient Greek shipping magnate who formed the Colossus consortium, beamed into TV cameras as he shook Captain Lindemeyer's hand. "We put Paul in charge of this boat," he said, "to get him ready for a really big command." Asked if he had still bigger ships in the planning stage, Ariapolous winked and, waving airily toward the immense bulk of the *Colossus Maru*, said, "If there is any [oil] left over after we fill her up, we may just have to do that." (The *Colossus Maru* will carry 250 million gallons.)

"Breakthrough"

In contrast to Ariapolous' banter with newsmen, President Nixon's personal representative, Eric M. Stermer, spoke of the historic implications of the occasion. "The

Colossus Maru," Stermer said, "represents probably the greatest single breakthrough in mankind's constant struggle to stay even with the world energy crisis." Petroleum companies, Stermer noted, will be able to ship oil in the great ship for less than \$3 a barrel, about half the cost of transport in smaller tankers. "Thus, oil producers will be encouraged to investigate and exploit new sources of the fuel that feeds the world."

The new tanker's first port of call, after loading at Ra's al Khafji, Saudi Arabia, will be the new Farallon Offshore Oil Facility (FOOF), constructed earlier this year off San Francisco's Golden Gate at a cost of \$130 million in federal funds. The *Colossus Maru* will probably arrive there sometime in mid-January, a spokesman said.

'Little Danger' of Massive Oil Spill Says Standard Executive

SAN FRANCISCO, January 13, 1976—A spokesman for Standard Oil said today that there was "little probable danger" of a large-scale oil spill from the stranded supertanker *Colossus Maru*. After a collision yesterday morning with the Navy vessel *North Platte*, the huge ship lost all power and went aground near the Farallon Islands. She is carrying about 225 million gallons of crude oil from Saudi Arabia. Standard Oil is one of five American petroleum companies which have leased the great ship.



CHARLES BRINKERHOFF
Calm in crisis

"You have to remember that this ship was constructed with precisely such a possibility in mind," Charles Brinkerhoff, Standard Oil's public relations head, said during a barrage of questions at a press conference today. "The ship is not just one great big floating tank, you know, but a carefully structured series of individual tanks. They're each sealed and separated by steel bulkheads. The chances of more than a small part of the oil escaping are very limited."

There was, then, some chance of oil being lost? "Well, as a matter of fact, we have an unconfirmed—and let me emphasize that 'unconfirmed'—report that one of the starboard tanks has ruptured slightly and may be leaking a small amount of oil."

Continued

Mon., Jan. 12, 1976 ★★ S.F. Examiner

Families, Friends say Goodbye to the Manassas

East Bay Correspondent

ALAMEDA, January 12, 1976—It's back to action again for the U.S.S. *Manassas*, the mighty nuclear-powered aircraft carrier which departed this morning for a resumption of its peace-keeping operations in Southeast Asian waters.

It will be the third tour of duty in the Far East for the *Manassas*, which

has just completed an extensive overhaul at the Mare Island Naval Shipyard.

More than 2,000 people—relatives and friends of the ship's crew—came down to wish a hearty *bon voyage* to the carrier and members of its task force, the destroyers *Sherman* and *Ruckle* and fleet oiler *North Platte*.

Navy spokesmen said the *Manassas*, under the command of Captain Mervyn L. Cruickshank, would pass under the Golden Gate Bridge at about 10 this morning, unless progress is delayed due to the heavy fog that has plagued the Bay Area over the past two days.

(8:00 A.M. weather forecast from U.S. Weather Bureau, January 12, 1976)

Overcast with night-and-morning patches of low fog along the coast, extending several miles inland. . . . Winds SW 15-25 mph, increasing in strength late today or tomorrow. . . . Chances of rain 40 percent today, increasing to 70 percent this evening and 90 percent by late tomorrow. . . .

(Radio message from Farallon Offshore Oil Facility, January 12, 1976)

SHIP COLOSSUS MARU HAS SUFFERED COLLISION DAMAGE WITH NAVAL VESSEL NORTH PLATTE. COLOSSUS MARU REPORTS SHAFT SPRUNG. TUGS ATTEMPTING TO HOLD SHIP AGAINST DRIFT TOWARD MIDDLE FARALLONES.

Brinkerhoff said there was little possibility that an attempt to pump the oil off the ship into smaller tankers would be made. "In the first place, it would take days—perhaps weeks. In the second place, according to reports we've seen, the storm is going to become a real blow. Heavy seas will make transfer almost impossible."

Brinkerhoff conceded that the problems involved in rescuing the vessel are great. "As many as 15 tugs at a time have attempted to move the ship and failed," he said. "Our options seem limited to repairing and taking her off under her own power."

When asked if the expected storm would be likely to cause damage to the great ship, Brinkerhoff replied, "You're talking about the largest ship in the world—a million deadweight tons. Can you imagine anything that big being seriously affected by any storm you ever heard of?"

Standard Oil and the other companies leasing the ship were doing everything possible, he emphasized, to prevent any major problem with the oil. "We are in constant communication with the local offices of the Environmental Protection Agency, in case any emergency measures need to be taken. We do not anticipate such a possibility, however."

Asked if he categorically denied the possibility of a major oil spill, Brinkerhoff snapped, "Of course not. Standard Oil is not God."

(Radio message from Captain Paul C. Lindemeyer of the *Colossus Maru*, January 13, 1976, 1:27 A.M.)

CURRENTS AND HEAVY SEAS STRAINING COLOSSUS MARU BADLY. ENGINEER REPORTS WATER IN ENGINE ROOM. MAY HAVE OIL LEAKAGE IN SEVERAL TANKS. SHIP MAY BE BREAKING. MASTER AND THREE CREW AND OPERATOR STAYING ON BOARD. ALL OTHERS LEAVING.

(Transcript of a television interview with naval architect Frank Conlin on the "Kaffee-klatsch Hour" KLM-TV, San Francisco, January 13, 1976. Jim Boyle is the interviewer.)

BOYLE: Before we begin accepting telephone calls from our viewers, Mr. Conlin, perhaps it would be a good idea to back up a bit, so to speak, and reiterate for the viewer the present situation in regard to the ship *Colossus Maru*. So far as we know the details, at any rate.

CONLIN: Yes, that would be a good idea.

BOYLE: All right, then. At approximately 4:15 this morning, the oil tanker *Colossus Maru*, which has been grounded near the Farallon Islands since early yesterday afternoon, apparently broke in two. Now, this vessel has been touted as the largest, most carefully engineered ship in the world. How on earth could it simply break in half?

CONLIN: Well, simply put, the ship's size is its very weakness. You reach a certain point when strength has nothing to do with size. No, let me put it this way—you reach the point when *lack* of strength has a great deal to do with size, depending upon the environment. You know what I mean?

BOYLE: I'm not sure I understand.

CONLIN: Okay, try to look at it this way. The blue whale is the largest mammal in the world, the largest and the most powerful. Yet its strength depends entirely upon its environment. I mean, it was created for the sea, designed in such a way that it has to be surrounded on all sides by water—by an even pressure—for it to survive. You take that blue whale out of the water and put it on land and it will simply collapse, done in by its own bulk. Its skeleton was never meant to support it in such a way. The animal's weight would crush it.

BOYLE: Are you saying that is what has happened to the *Colossus Maru*?

CONLIN: Not precisely, but close enough to that to make my point. This ship, a million tons in weight and nearly 1,500 feet in length, is sort of a man-made version of the great blue whale. It was designed to sail along on the deep blue sea, but here it is, part of it anyway, sitting on the bottom of the ocean, grounded. The pressures put on the vessel under those

circumstances are just tremendous, incalculable. You combine that with the currents and the rough seas we're having, and you have the combination of forces that just sort of wore the ship in half.

BOYLE: What do you think is likely to happen now?

CONLIN: It's pretty obvious, the way I look at it anyway. If the storm keeps up, the ship will be torn to pieces.

BOYLE: Isn't there anything that can be done?

CONLIN: I can't think of much. You can't sink the pieces, since they're already grounded. You can't tow them anywhere—they're too big and too full of oil and water. You can't pump ping-pong balls into them and refloat them—there aren't that many ping-pong balls in the world. You could bomb them, I suppose, but all you would be doing is breaking them up sooner than later. No, nature and the law of physical properties will take care of the ship. Or what's left of it.

Captain, Remaining Crew Rescued

SAN FRANCISCO, January 13, 1976—Captain Paul Lindemeyer and four others were rescued by helicopter today from the beleaguered super-tanker *Colossus Maru* almost precisely 24 hours after the ship went aground near the Farallon Islands. Heavy storm conditions made the rescue operation "very tricky," Coast Guard spokesmen said. However, Lindemeyer and his crew were doing "as well as could be expected—tired, but in generally good shape."

Although visibility was severely limited by the storm, Coast Guard officials said that the million-ton tanker, carrying an estimated 240 million gallons of oil, appeared to be "going to pieces," in the words of one helicopter pilot. "It's just a mess," he said. "It's like watching a skyscraper break up during an earthquake or something. That thing is just huge, but you can see it moving in the water. You can see it just going to pieces. I've never seen anything like it."

(Transcript of a taped telephone interview on the "News in Depth" program of radio station KLOG, San Jose, January 14, 1976.)

When the news of the *Colossus Maru* disaster came in, the KLOG newsroom immediately contacted scientists for their views on the seriousness of the situation in regard to potential oil damage. Here is a tape of a telephone interview with Dr. Howard Bostwick, professor of marine biology at the University of California, Santa Cruz. KLOG newsroom reporter Tom Sanders questions Dr. Bostwick:

SANDERS: Dr. Bostwick, how bad is this likely to be?

BOSTWICK: I don't know. Nobody knows. It depends on how much oil escapes. And where it goes. How much oil does a tanker that size carry, anyway—200 million gallons?

SANDERS: We understand that it's closer to 250 million.

BOSTWICK: Okay, to keep it simple, let's say 200 million gallons actually escape. . . . I'm doing some quick arithmetic on the slide rule here, figuring volume and area. . . . About seven and a half gallons to the cubic foot, so that should come to about 26,600,000 cubic feet. Assuming a layer an inch deep, that would cover, let's see, 319 million square feet, and a little more. It works out to eleven and four-tenths, call it eleven and a half, square miles, covered an inch deep in oil.

SANDERS: Well, then, that's—

BOSTWICK: Wait—sorry. The oil is likely to spread more. I don't know how much more. An average thickness of, say, one-tenth of an inch means a covering of 114 square miles. Of course the oil could spread paper thin, or thinner, cover perhaps a thousand square miles. . . .

SANDERS: What?

BOSTWICK: For a thousand square miles, think of a strip of ocean. . . . Well, you have to remember that prevailing winds will be pushing the oil shoreward while the currents will be sort of stretching it in a southern direction. . . . let's say it's a strip 20 miles wide by 50 miles long, or ten miles by 100 miles, or even five miles by 200 miles—or, Lord knows, two miles wide by 500 miles long.

SANDERS: That means it could cover the whole coast from San Francisco to Santa Barbara. Is it likely to do that?

BOSTWICK: Well, possibly not. You wouldn't expect the oil to form a neat, uniform strip. There would be different currents and eddies acting upon it. It would probably keep breaking up into separate patches, or "lenses," anywhere from one to 20 square miles in size. At first, anyway.

SANDERS: At first?

BOSTWICK: Yes. It tends to spread out with time. There was that oil spill at West Falmouth, Massachusetts, a few years ago. Six hundred and fifty tons, or something like that, anyway, much less than what we're talking about here, maybe as much as a million tons. Anyway, at West Falmouth, some months after the spill, the oil was covering I think seven and a half square miles.

SANDERS: Some months later? Didn't they clean it up?

BOSTWICK: Well, they did all the usual things. I'm not sure, but I think they managed to recover something like ten percent of the oil. The rest went into the fish and the shellfish that were killed, or down to the bottom.

SANDERS: I thought oil floated on water.

BOSTWICK: It does, at first. But oil has what are called "volatile fractions," many of which are soluble in water. They get into the water column vertically and end up affecting the bottom fauna. We know that crude oil has many toxic fractions that can kill fish and shellfish. Of course, we don't know how the larval and other young stages of the fauna might be affected. We do know that over several square miles of the West Falmouth region there were no shellfish at all for more than two years after the spill. And then, there are always the carcinogens.

SANDERS: Carcinogens?

BOSTWICK: Yes, cancer-pro-



Dr. Howard Bostwick, U.C. marine biology expert.

ducing chemicals. Many of the volatile fractions in crude oil produce cancer in mice. Maybe they will in fish, too—or even people, although you'll have to check with a cancer researcher for that. I don't know anything about extrapolating mouse experiments to people.

SANDERS: Dr. Bostwick, our time is about up. Can you give us any kind of firm prediction in regard to this situation?

BOSTWICK: Of course not. As I said before, it all depends upon how much oil escapes and where it goes. There are too many unknowns. But think of this: The West Falmouth spill involved 650 tons of oil and utterly ruined seven or eight square miles of fishing ground and beaches and marshes, and caused a state ban on shellfish collection over a huge area for more than two years. Now we're talking about maybe a million tons of oil.

SANDERS: Then you think it's going to be very bad?

BOSTWICK: All right, all right. I think it's going to be so bad I can't find words for it. I can't even imagine it. Can you?

Official Navy photograph of dead seabird. "There's millions of them!" said observers.



STERMER, HOLMAN SURVEY OIL DAMAGE

SANTA BARBARA, January 16, 1976 (UPI)—Day-old Secretary of the Interior Eric Stermer and California Senator Ben Holman held almost simultaneous news conferences here today after each had toured the oil-covered California coast, Stermer in a four-hour helicopter journey, Holman in a two-day automobile tour.

Holman was visibly upset. "This is the greatest pollution disaster in American history," he said. "Once more, we have paid too high a price for so-called 'progress.' I have not seen one beach between San Francisco and Pismo Beach that is not blackened with oil. I have seen acres of fish belly-up in the water. I have seen dead birds stacked up behind bird rescue centers like piles of garbage. I have seen untold thousands of young people—the only grace note

in this whole ghastly mess—working 15, 20, even 24 hours a day trying to clean beaches and save birds. I have seen them crying in frustration and exhaustion.

"There is no way at all to assess the complete damage, or to know how long it will take to repair—and how in God's name are we ever going to repair the damage done to those millions of dead fish and birds and other sea creatures?"

Holman said he would immediately request both the governor and the President to declare the 300-mile region between San Francisco Bay and Point Concepcion a disaster area. "But that is only a minor step toward what has to be done. At the earliest opportunity, I intend to introduce legislation aimed at seeing to it that nothing like

this ever happens again."

When asked if that legislation would seek to ban the use of supertankers like the *Colossus Maru* in American waters, Holman's reply was a terse "Precisely."

An hour later, Secretary Stermer held his own news conference on the steps of the Del Monte Lodge, where he will be staying tonight before traveling to the western White House in San Clemente tomorrow to make a personal report to President Nixon.

"This is, of course, a terrible tragedy," Stermer said, "and you can be sure the Administration will be doing everything in its power to help." Stermer said he also would be requesting that President Nixon declare the coast a disaster area as soon as possible.

Stermer said that the worst

appeared to be over. "Officials of the Environmental Protection Agency tell me that it is not likely that the oil will spread much, if any, beyond Point Concepcion. And now that we have calmer weather, cleanup operations can begin in earnest. I have every hope that the problem will be rectified very soon."

When informed of Senator Holman's proposed legislation, Stermer said, "I certainly can sympathize with the Senator's concern over all this. As I said before, it is a terrible tragedy. Yet what I think has been forgotten in the whole unfortunate situation is that we have not only lost birds and shellfish and beaches but at least 200 million gallons of oil at a time when we can ill afford it. I do not think we should lose sight of that fact."

(Excerpt from a speech given by Alan Robertson, Assistant Administrator for Air and Water Programs, U.S. Environmental Protection Agency, before the Oil Spills Prevention and Control Conference, October 12, 1976.)

And so, in conclusion, I must say that in spite of an optimum of money, time, and energy, circumstances defeated us on the California coast. Our technology was woefully inadequate to the occasion, as we fully expected it would be. The seven oilers—or "slick-lickers"—we managed to bring to the scene were useless until the storm abated, although they have since been able to recover an estimated 20 to 25 percent of the oil—some 52 million gallons, in fact.

Similarly, any attempts to employ nontoxic detergents and dispersants were nearly useless as long as the storm continued. By the time we could bring them into play, the "boiling" action of the sea had already begun to emulsify much of the oil. Besides, there was so much of it, and it spread faster and more widely than we could either imagine or expect.

Yet, as I have noted earlier, the technological problem—however basic—was not the primary one. The greatest difficulty we faced in the wake of the *Colossus Maru* disaster was the failure of the system—or, as I might put it more accurately, the nonsystem. You gentlemen in the petroleum industry can be justly proud of the contributions in manpower, materials, and equipment your people brought to this great tragedy. Similarly, the people of California—those scores of thousands up and down the coast who gave of their time and energy—can be proud.

Yet we cannot be proud of a system that did not work. We cannot be proud that there was not then nor is there today an adequately financed, staffed, structured, *functional* oil-cleanup program capable of taking on a challenge the dimensions of the *Colossus Maru* spill. With all the energy and good intentions in the world, we found our efforts fragmented, and too often at cross-purposes. I have already cited the case of the Army Corps of Engineers' plan to dump chemical

reagents on the oil outside the Golden Gate, then set it afire. One does not even like to consider what the consequences might have been—San Francisco Bay on fire? Fortunately, our office was able to persuade engineers of the folly of such a plan, but the very fact that a responsible agency of the government could even consider it points up the size of our problem.

We cannot continue in such a way—cannot and must not. The American people are looking to their government, but they are also looking to you, the leaders of your industry, for solutions. I for one have a high degree of confidence in the American genius for cooperation and technological prowess. We can solve this problem. Any nation that can split the atom and walk on the moon can certainly learn to clean up the world it must live in. It will take time, money, and careful planning on the part of all concerned—but in the end it will pay off for all of us. The future is right around the corner. We must learn to face and conquer what it holds for us.

LETTERS TO THE EDITOR

(San Francisco Chronicle, February 18, 1976)

Editor—As chairman of the Ocean Beach Volunteers, I want to thank you for your outstanding coverage of our efforts—futile as they proved to be—to save the lives of thousands of birds, sea lions, whales and other animals killed by the recent oil spill. Your special picture section on the devastation of the Monterey Peninsula, entitled "The Black Sands of Carmel," will be of great influence in the current international campaign for tanker control.

I do take exception, however, to one word that you and the other news media used repeatedly in describing the COLOSSUS MARU disaster—namely, the word "accident." The collision outside the Golden Gate was not an "accident," in the usual sense, nor was it an "act of God," as one oil company official said. It was the inevitable outcome of a calculated risk—a risk taken knowingly, in pursuit of gain. The gain, in this case, was to be a cost saving to the sellers and users of a particular kind of fuel for a particular kind of vehicle engine. The risk, as usual, was to be taken by the general public, including the silent public of plants and animals and the unborn public of the future.

In saying this event was not an "accident," I do not mean to imply anything about the legal responsibility for the most destructive oil spill in history, ten times as large as the TORREY CANYON catastrophe off the coast of Cornwall in 1967. The question of legal responsibility presumably will be settled by the hundreds of lawsuits that already have been filed by state, city and county governments, property owners, yacht clubs, fisheries and resorts. (Three times as many suits, I understand, as in the Santa Barbara oil spill of 1969, which resulted in an estimated \$8 billion in claims.)

The courts may award tremendous damages—or they may decide that the ship owners and oil companies have no financial liability at all. In either case, we will still be left with the fundamental question of whether the owners, refineries, and the United States government were morally justified in bringing a tanker of that size to the coast of California.

In 1973, when the Army Corps of Engineers began studying deep-draft harbor facilities for petroleum supertankers on the Atlantic, Pacific and Gulf coasts, the question of risk came up repeatedly at public hearings. Many people were ap-

palled by the danger of an oil spill from a giant tanker. Yet, the opposition to building offshore oil transfer facilities was confused and divided. Some environmental organizations devoted all their energy to preventing petroleum transfer at certain sensitive places, such as recreation areas or bays rich in marine life. Some spoke out primarily against dredging and filling to deepen channels. A few tried to persuade the Army Engineers to study alternative sources of fuel, while still others urged that the study be broadened to cover the full environmental cost of harbor development, economic growth, and other results of a pro-tanker policy.

To all these comments, the Engineers calmly replied that they were not going to recommend any particular sites, that the investigation of substitute fuels was outside the scope of the study, that they were merely trying to learn whether there was a "need" for additional port facilities—and, if so, to list the advantages and disadvantages of various locations.

The outcome was predictable, even then. The pro-development lobby began its usual drumbeating, calling for "jobs," for "economic progress," for "positive action to meet the threat of foreign competition." Added to this was the dire threat that the entire country was about to grind to a halt for lack of fuel. Major oil companies and public utilities had been sounding this alarm for years in an effort to convince the public that the so-called "energy crunch" or fuel crisis necessitated huge government expenditures for harbors to handle such monstrosities as the million-ton tanker. The decision to build the Farallon Off-Shore Oil Facility at public expense is an example of the success of this now-famous campaign, known in the public relations profession as "The Selling of the Crunch."

In the end, all it took was a few closed gasoline stations and the prospect of rationing to panic the country into risking a supertanker spill. As any of our hundreds of volunteers, working night and day in the blue-black muck at Ocean Beach, can tell you, it was an "unacceptable risk."

Why couldn't we convince our government of that fact a few years ago?

RICHARD REINHARDT
Ocean Beach Volunteers

POSTSCRIPT

Interview with Captain Paul C. Lindemeyer, May 16, 1995. From John Case's book *The Day the Ocean Died* (New York, 1996).

LINDEMAYER: I suppose you want to hear about the *Colossus*; they always want to hear about the *Colossus*.

CASE: Well, Captain, it was the only million-tonner ever built, and. . .

LINDEMAYER: And it's all in the record. You can look up the hearings.

CASE: I have, Captain, here it is all worked out on a chart—how you tried to hold your position until the task force cleared the Southeast Farallon, the precise moment of the power failure on the carrier, where the *North Platte* moved out of position, the point of impact, the drift of the *Colossus*. . . . But there is nothing of the human flavor . . . no "feel" for what was happening. For instance, when you had "programmed" your course to the pumping facility off the Southeast Farallon, just how committed to your course and speed were you? Did you have a computer like they use on the bridge now?

LINDEMAYER: Yes, we had about the same equipment, but with the *Colossus* the approach program was more . . . more inevitable. It took 15 miles to stop her, you know.

CASE: "Like handling an iceberg with an outboard motor" was one of the comments I've read.

LINDEMAYER: Oh, it wasn't quite so bad as all that. But then, you realize that as slow as we were going those last 30 minutes, that even with the two tugs, you just don't push a ship like that around. And it took time to see just what the current was doing to us.

CASE: Yes, yes. It seems to me that with that current setting you into dangerous water and the fact that you had almost no steerage way, the ship was really out of control. . . .

LINDEMAYER: I wouldn't say that. We were getting off the program, but we still had lots of room. I wasn't half as worried as the docking master.

CASE: It was the docking master who was really maneuvering the ship at the time, as I understand it.

LINDEMAYER: Huh! If you can call it that. But I was right there—the captain is always responsible. I was in radio contact with the task force and the oil facility all the time and I

had everything on my radar—except when the *North Platte* went into the shadow of the carrier. We couldn't see, you know, it got really thick where the task force was supposed to pass.

CASE: The captain of the *North Platte* testified that he lost you about the same time in the radar shadow of the *Manassas*. You have never commented. . . .

LINDEMAYER: The damn fool should have *known* where we were! A million tons of ship doesn't turn up somewhere else all of a sudden—like him.

CASE: One thing I have wondered: why didn't you ask the task force to stand clear of *you*?

LINDEMAYER: We were programmed. They knew where we were, and you don't tell the Navy what to do. Besides, if the *Manassas* hadn't slowed, or even if the *North Platte* had kept going, we would have cleared easily.

CASE: By a quarter-mile? Isn't that cutting it mighty close?

LINDEMAYER: We didn't have any options left. It looked as if we should speed up to keep us clear of shallow water, slow down to give the task force more room, turn left to get more sea room, turn right to clear the end of the task force.

CASE: But actually, none of those maneuvers would have placed the *Colossus* in a much different position at the time of the collision, would it?

LINDEMAYER: If you mean there was nothing to do by this time, you have the wrong impression, I think. You see, we could have gone aground, or risked it, in maybe 30 minutes, if we hadn't gone full ahead and had the tugs push us to port earlier when it looked certain that the task force would clear us, even if it was by only a quarter-mile. The docking master knew the water and he did the right thing, the same thing I would have done. But you are right that in the time remaining, considering what happened to the task force, this change of speed and direction didn't make much difference right then in the big picture. But as it worked out, as you know, just like in any collision, you are talking about miles at the start maybe, but at the end it may just be a matter of a few feet.

CASE: You mean that you were taking actions that would affect your general position a half-hour ahead—

while a vessel like the *North Platte* could take actions that would become important in, say, five or ten minutes. As though you were working one rule book, while Captain Anderson was using another.

LINDEMAYER: That's an interesting way to put it.

CASE: Then, when you picked him up on your radar again. . . .

LINDEMAYER: We went right by the book: reversed and had the tugs try to swing us to starboard, for all the good that could do.

CASE: I'm trying to see your state of mind in those last ten minutes, Captain, before the *North Platte* swung into your stern—if this isn't prying. What did you feel when you knew the *Colossus* couldn't possibly respond effectively to any commands?

LINDEMAYER: I did the right thing. It was all I could do—and the board of inquiry agreed.

CASE: Captain Anderson was also cleared.

LINDEMAYER: They never made him an admiral.

CASE: What did it feel like when you knew your propeller shaft was damaged and that you had no power to hold you against your drift?

LINDEMAYER: I looked at those little tugs and thought about that damned scheme to tow icebergs from Antarctica to Los Angeles. Funny what

goes through your mind at a time like that.

CASE: Did you feel the *Colossus* was doomed?

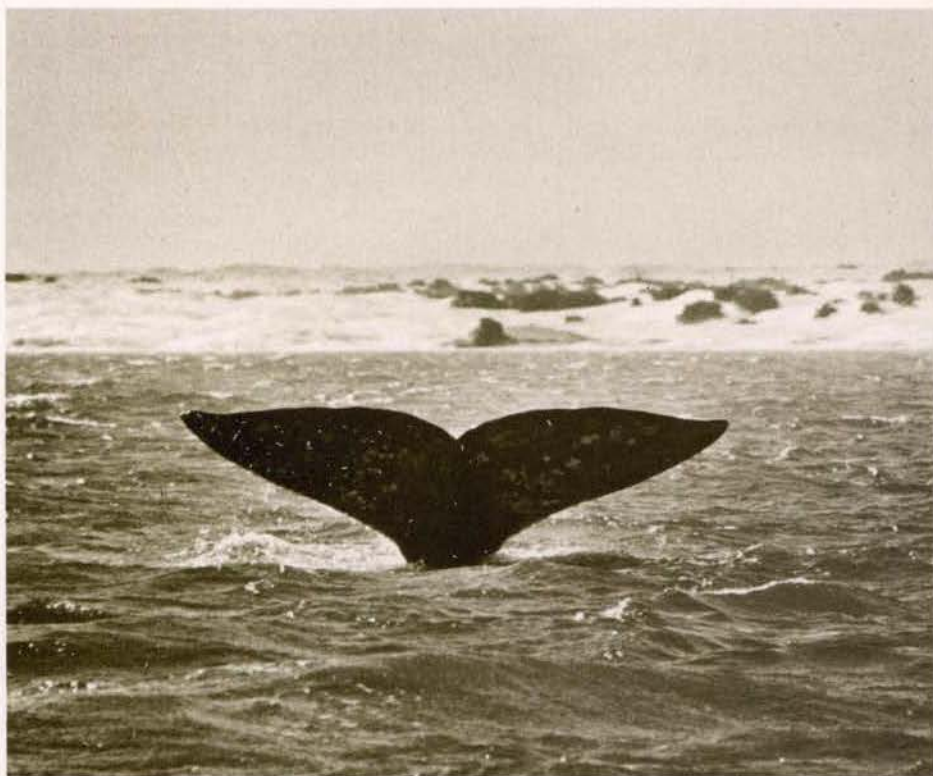
LINDEMAYER: After our approach at Ra's al Khafji, I *knew* it was only a matter of time before something would happen. It won't hurt anybody now to say that. Or that I had asked for a six-month leave before we got to San Francisco, figuring that I could work it to get a different ship.

CASE: There isn't a *hint* of this in your testimony at the time. Or later. . . .

LINDEMAYER: There was a lot of money involved, young man, hundreds of millions at first and then billions. *Billions*, in those suits. *Billions*, moving like a force of nature—like the *Colossus*.

AUTHOR NOTE

T. H. Watkins is associate editor of THE AMERICAN WEST and author of the Sierra Club's THE WATER HUSTLERS (with John Graves and Robert H. Boyle) and CALIFORNIA: AN ILLUSTRATED HISTORY. Harlan Soeten of the San Francisco Maritime Museum conceived the circumstances of the COLOSSUS-MARU'S encounter with the NORTH PLATTE. Nicholas Rosa, a writer, editor, oceanographer, and marine biologist, contributed the interview with "Dr. Howard Bostwick." Richard Reinhardt is a freelance writer who has been following the Army Corps of Engineers' current superport hearings. With certain obvious exceptions, all names used in this article are fictitious; any resemblance to persons living or dead is purely coincidental.



lions of acres of tundra and muskeg, as well as every river it crossed, with potential oil spills. Threatening the wildfowl of the North Slope as well as the major fishery resource of Prince William Sound, it promised an uncertain future for the large-animal wildlife whose territory it invaded. (Ramps were proposed to accommodate the migratory passage of the moose and the caribou.)

While Alaskans are fond of saying that building TAPS would be like running "a string through your back yard," so vast is the territory through which it would pass, the analogy is, of course, specious. It is more accurate to say that the construction of such a pipeline would be like cutting a knife wound through living flesh. And the laying open of the land is only the beginning. All the things which go with a huge construction effort—roads, heavy equipment, facilities, etc.—compound the potential damage, not to mention the people who will inevitably follow.

Still the oil industry could not wait. Before federal permission for TAPS was granted, the consortium ordered \$200 million worth of 48-inch diameter pipe from Japan. Pipe piled up at Valdez and Prudhoe Bay, and in between, eight construction camps like small trailer cities went up in what had been wilderness.

The state cooperated with enthusiasm. Anticipating a city at Prudhoe Bay, it sold the Arctic land to the oil companies for \$5 an acre, and leased the mineral rights for \$900 million. Governor Hickel bulldozed through the "Hickel Highway," the so-called winter road which bisected the Brooks Range at Anaktuvak Pass. (The BLM obliged with another special use permit.) Trucks lined up and waited for weeks for the opening in March, 1969. (Most of the vehicles were flown back to Fairbanks in cargo planes.) The summer thaw revealed the twin tracks—or canals—they had carved through the muskeg and tundra.

Reacting to the growing environmental movement, the state and federal governments and the oil industry assured the world that the pipeline would not destroy "the ecology" of the terrain through which it would pass. There were "strict" state and federal regulations drawn up, and

elaborate industry plans for protective devices to guarantee against oil spills. "House ecologists" roamed the Arctic Slope and planted grass in the wounded tundra. Each oil camp had its own sewage disposal plant.

The Natives, meantime, watched and waited. When a group of conservationists sued in 1970 to halt the pipeline construction, several Native groups joined them. To the surprise of almost everyone, the federal courts held up the building of the pipeline. Oil operations came to an abrupt halt, and even while the pipe continued to pile up, the construction camps were abandoned. The scene of action shifted to Washington, D.C. While the legal aspects of building the pipeline would have to be resolved—in Congress, as it turned out—it was clear to all concerned that the "freeze" of Alaska, extended under the Nixon administration, must be thawed. At long last, the Native claims would have to be settled.

It seemed a propitious time. With civil rights a major issue, the Alaskan Native Claims Settlement Act appeared to many to offer a way to right some of the white man's wrongs. And in the minds of most people—congressmen and senators included—Alaska was still a vast "empty" wilderness which could easily be dispensed with. It was easy to argue that the Natives must have 40 million acres of land they demanded: and a billion dollars as well. It was even easier to push the passage of the Native Claims Settlement Act when the machinery was greased with oil. With little fanfare, and almost no notice, Congress quietly passed the Native Claims Act in October, 1971. It was an incredibly complex and confusing piece of legislation and promised seven lively years of negotiations before its terms could be met. Those terms are potentially the most devastating yet in the disposition of the Alaskan land, and this will be the final disposition.

The 40 million acres of Native lands will be parceled out in townships, many of which will not be contiguous. This will set up the same impossible checkerboard ownership problem which has caused headaches since the railroad grants of the last century. While the Natives cannot select lands already owned by the state or lands within the National Parks System, they have first choice elsewhere, including limited selections inside the Wildlife Refuges.

The Act also requires the final determination of federal land withdrawals. Under its terms, the Secretary of the Interior has set aside 45 million acres of public-interest lands (called d-1 lands) destined for multiple-use management by the Bureau of Land Management, and closed to state and native entry. The act also directs the secretary to withdraw 80 million acres to be studied for possible inclusion in the National Park System, the National Forests, the National Wildlife System and the National Wild Rivers System. This d-2 land is closed to all other entry, including mining. (To date, Secretary Rogers C. Morton has set aside 79 million acres of d-2 land. He has also withdrawn a 4.5-million-acre pipeline utility corridor from Prudhoe Bay to Valdez, and a second one-million-acre utility corridor which skirts and isolates the Arctic Wildlife Range.)

The Public Heritage

It is apparent to conservationists that large tracts of d-2 land must be set aside permanently, not only for the sake of the American people who have so long subsidized Alaska, but for the sake of the land itself and the varied and magnificent wildlife which it supports. Major efforts now focus on establishing the following preserves:

1. The Gates of the Arctic National Park in the central Brooks Range encompassing the very best of the nation's Arctic wilderness and including a cross-section of the Brooks Range from the boreal forests on the south to the tundra of the North Slope. This proposed park would include habitat of Dall sheep, barren ground grizzlies, and wolves, and give the highest degree of protection to the passes used as migration routes to the North Slope calving grounds by the Arctic caribou herd, at about 240,000 animals Alaska's largest. [about 9.5 million acres.]
2. The St. Elias-Wrangell-Chugach Mountain International Park extending southeast to Glacier Bay National Monument and south to the Gulf of Alaska. The Kluane National Park and Game Range in Canada has already been established. The combination, established by joint treaty, could be unequalled in the world. Glacial landscapes of the Wrangells massif and the St. Elias Range are in the class of Mt. McKinley, and the wilderness river valleys are among the most

continued on page 24

In wild country the sky comes down...



••• clear to the ground. Not just to the tops of buildings. There are no fences around flowers, no cages for birds. And you can walk on the grass.

Inner city kids can't get over it.

Some of these children obtain their first wondering sense of a world unrepressed by asphalt through the Sierra Club. And it changes forever their way of looking at things. Ever since Eden, the care of the earth and its creatures has been man's responsibility. He is learning to his sorrow that headless, heedless progress can squeeze out priceless, even irreplaceable values. Yet there is nothing one person can do about it.

Or is there?

"Such is oft the course of deeds that move the wheels of the world," wrote J. R. R. Tolkien. "Small hands do them because they must, while the eyes of the great are elsewhere."

... a woman—suspended in traction in a western hospital bed—watches through her window as a truck repeatedly dumps fill into a beloved bay. Helpless. Or is she? Repeated nagging phonecalls to authorities and press (she could move her dialing finger) produce real enforcement of existing law.

... a midwestern student consciously develops a habit. Every few days he bicycles in his favorite park and also keeps an eye on a concessionaire seething with not-so-secret dreams of expansion.

... an eastern congressman patiently helps weave into law his outrage at the reduction of a great whale into small cans of mediocre dogfood.

Small hands, eyes of the great—both can make a difference. Multiplied by thousands and joined in common cause they create a force to reckon with.

Near the close of the last century a man in love with wildness welded a group of concerned individuals into a brotherhood pledged to "explore, enjoy, preserve, undertake, publish, educate and enlist" in behalf of all scenic resources, forests, waters, wildlife and wilderness.

Eighty years later, John Muir's sapling Sierra Club has branched out beyond his wildest imaginings. Today 140,000 members in 43 chapters span our nation and Canada. Wherever the quality of man's life is in peril, at either a national or local level the Sierra Club goes to work through its vigorous programs for education, exploration, outings, research, legislation, and lobbying.

Our numbers have grown but not as fast as the threats to our environment. In such uneven conflict there can be no innocent bystander. We need each concerned heart and pair of willing hands to help battle the flood of pollution, greed, ignorance, apathy and overpopulation which may yet overwhelm us.

If we don't stop it, who will stop it for us?

If we don't stop it now, how can we stop it?

On a small planet where nature has been processed beyond recognition, where will a man seek the wonder and terror vital to the survival of his soul?

Will you lend us your help?

We invite you to join us by detaching one of these cards and sending it in with the membership fee.

As a Sierra Club Member you can take part in:

- conservation work
- wilderness outings
- chapter activities

and be as active as you wish.

You will receive:

- the Sierra Club Bulletin
- local newsletters
- discount on Club books

ark

: to Stand How Long?

ing gravel chokes the main channel of especially the corridor along the Tall Trees.

Sierra Club, P.O. Box 7959 Rincon Annex, San Francisco, Calif. 94120

Date _____

I have informed myself about the purposes of the Sierra Club and wish to support them. I hereby apply for membership and enclose \$_____ as total payment. (See schedule on back.) Dues include subscription to the Sierra Club Bulletin (\$3) and chapter publications (\$1).

Print Name(s) _____

Print Mailing Address _____

Zip Code _____

Signature _____

Gift Memberships: A card will be sent acknowledging the membership as a gift in your name.

Donor: Print Name _____

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ADMISSION FEE AND ANNUAL DUES:

	Admission fee	Dues	Total
<input type="checkbox"/> Life.....	*	\$400.00	\$400.00
<input type="checkbox"/> Contributing.....	\$5.00	50.00	55.00
<input type="checkbox"/> Supporting.....	5.00	25.00	30.00
<input type="checkbox"/> Regular.....	5.00	15.00	20.00
<input type="checkbox"/> with spouse.....	5.00	22.50	27.50
<input type="checkbox"/> Junior (thru 14)...	5.00	5.00	5.00
<input type="checkbox"/> Student (thru 23)..	*	8.00	8.00
<input type="checkbox"/> with spouse.....	*	13.00	13.00
<input type="checkbox"/> Senior (60 & over) .	5.00	10.00	15.00
<input type="checkbox"/> with spouse.....	5.00	15.00	20.00

*Admission fee is waived for junior members, full time students through age 23, and life members.

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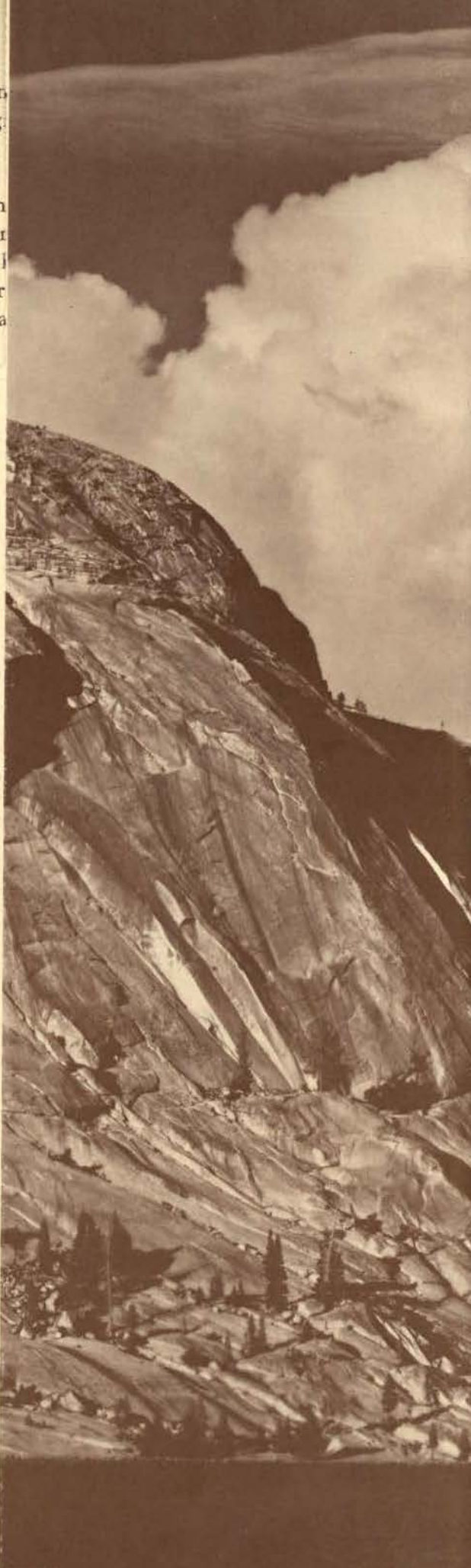
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Erosion in the Redwood Park

The Redwoods: to Stand How Long?

WHEN CONGRESS established the Redwood National Park in 1968, it authorized the Secretary of the Interior to establish controls over logging operations on lands adjacent to the park or even acquire additional lands if such actions should prove necessary to ensure the natural integrity of the park. In September, 1971, the Sierra Club filed a formal petition with Interior Secretary Rogers Morton urging him to exercise this authority. Redwood National Park, the Club claimed, was severely threatened by logging operations just outside its boundaries.

In response to this petition, Secretary Morton ordered that studies be undertaken to determine the nature and magnitude of the problem at the Redwood National Park. For some reason, the resulting reports were not released upon their completion. After several months had elapsed, the Club filed suit in January, 1973, under the Freedom of Information Act, to force the Interior Department to release the reports.

Prepared by a team of geologists from the U.S. Geological Survey, hydrologists, and foresters from several agencies, the reports clearly demonstrated the need for giving greater protection to the Redwood National Park.

"These reports confirm what we have been saying for more than five years," asserted Dr. Edgar Wayburn, the Club's leader in the effort to protect the redwood park. "The park is in deep trouble because of erosion and logging all around it, and the boundaries are plainly not adequate to protect it," he said. "Now, at last, we have scientific verification of the serious threats to the park and especially to the segment containing some of the world's tallest trees."

The erosion hazard on the lands surrounding the main unit of the park on Redwood Creek is extremely high because of the presence of highly erodible soil types, heavy rainfall, steep slopes, and narrow, deep tributary channels "which are highly susceptible to clogging by debris and consequent bank cutting." Such natural conditions become major problems with the kind of logging now underway: bulldozer logging, complete clearcutting of everything in sight, logging in the wet season, and access roads that are carelessly constructed and poorly maintained. As a result, the Redwood National Park is now in danger.

Eroding gravel chokes the main channel of Redwood Creek so that it overflows during winter storms and may cut new channels across flats with tall trees. The rising streambed causes the water to undercut the toe of steep and unstable adjoining slopes, resulting in landslides. Moreover, eroded material from sidestreams forms deltas in the main channel, which deflect the current to the opposite bank where undercutting occurs.

Detailed maps, prepared on the basis of high-elevation multi-spectral photography, show a strong correlation between eroding conditions and disturbance of the natural condition, either by logging, road construction, or overgrazing. The least erosion is occurring in undisturbed areas. Protection of the long half-mile-wide corridor along Redwood Creek requires controls over adjoining lands. According to the report, "Protection of this corridor is impossible... unless the resource manager can exercise some controls which extend beyond the present park boundary." It is clear that a narrow buffer strip around the park boundary will not be enough to protect the park,

especially the corridor along the Tall Trees. Critical landslide areas (especially on the steep east slope) as well as tributary channels (which could bring debris into the park), extend well back of an 800-foot buffer, such as was considered initially by the National Park Service.

The report concluded by outlining various alternatives under which the Secretary of the Interior might acquire additional property interests in the land outside the present park boundary to provide an additional measure of protection. The report stressed the importance of protecting tributary streams and shielding "obvious landslide areas" from impact, but noted that acquiring property around tributary channels and landslide areas "would create such a confusing pattern of ownership that it would be more economical to purchase all the upslope lands." In an internal staff study in November 1971, the National Park Service said it is essential "that a buffer zone comprising about 10,000 acres be established to protect the Redwood Creek area of the park." Such a buffer could be acquired, without further authorizing



THE LINEUP at the dedication of the Ladybird Johnson grove was impressive: (from the right) ex-President Johnson, President Nixon, Ladybird Johnson, Secretary Walter Hickel, Representative Harold Clausen, Governor Reagan, and Reverend Billy Graham. But as erosion threatens the nation's Redwood Park, officialdom averts its gaze. It will take more than ceremony to dedicate the park forever.

legislation, under authority the Secretary of the Interior now has.

Interior Secretary Rogers Morton now has these reports under consideration, but an aide, Dr. Richard Corry, has indicated the department does not intend to buy any

more land outright. Voluntary agreements are being sought from the lumber companies, but the local press reports they intend to start logging to the very edge of the park this summer.

Michael McCloskey

Auto Club Revolt: AAA Insurgents Question the Concrete Ethic

TO MOST PEOPLE, the American Automobile Association (AAA) means towing service and roadmaps along with their auto insurance, enough of a lure, it seems, to have attracted 15 million members. The various auto clubs that together comprise AAA, however, do not restrict themselves to such services. Two California clubs, for example, contributed \$25,000 of their membership money to defeat the California Clean Air Amendment on the November, 1970, ballot. This action is typical of auto clubs throughout the nation.

An observant member, no matter where he might live, would find that his local club had developed over the years a similar pattern of cooperation and collaboration with the highway lobby—the coalition of oil companies, highway contractors, public officials, and auto manufacturers. He would easily discover the persistent and intense lobbying efforts carried on by his association at local, state, and federal levels. He might listen in frustration or anger as his auto club representatives testified that they reflected the views of the membership in favoring more freeways and an expanded role for the auto. Yet if he wanted to participate in shaping the policies of his association, the member would find out quickly that board policies and bylaws virtually prohibit his participation in any association affairs. Auto club members do not elect their officers by ballot, but through proxy votes, which are difficult to collect and which effectively deny most members any meaningful leverage in the election process.

As a result, an increasing number of auto-club members have over the years become disillusioned with the policies of their local clubs relating to both environmental and general membership issues. In California, Maryland, Michigan, and New Jersey, dissatisfied auto-club members are now organizing in an attempt to reform the clubs from within, to make them more responsive to membership opinions and to environmental problems. One group of Northern California auto-club members, who are also conservationists, have taken on the powerful California State Automobile Association (CSAA) which, with its sister association to the south, the Southern California Auto-

mobile Association, has consistently lobbied for the perpetuation of the auto as king of California. Members for CSAA Reform began with 40 members two years ago and has grown to 1,500. It considers itself an ombudsman or watchdog group within the CSAA to protect the interests of rank-and-file members and to advocate responsive and responsible environmental policies. It has accused the CSAA board of directors of being insensitive to environmental problems and of being "self-perpetuating, unrepresentative of the membership, and paranoid in its attitudes and relationship toward its own members."

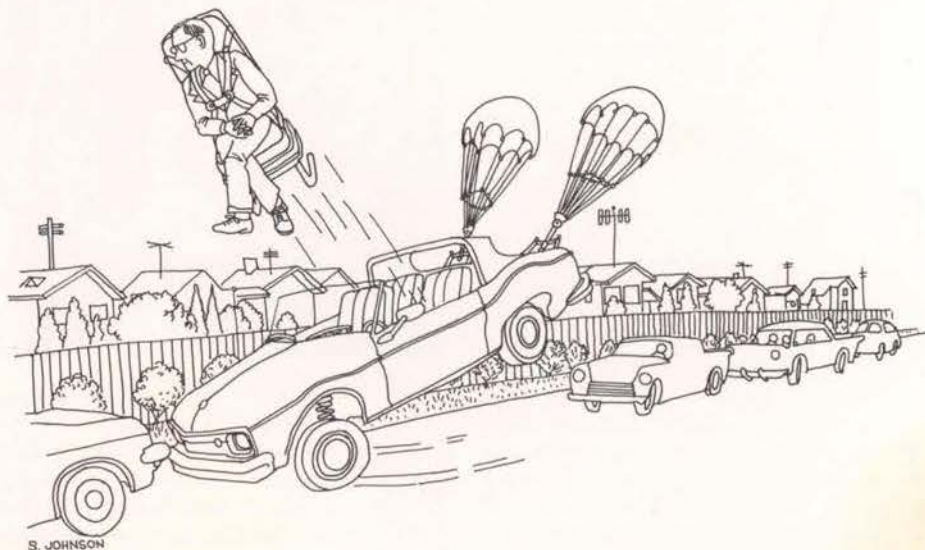
As a result of CSAA Reform's constant prodding over the last two years, and aided by public pressures, news media exposure, and the implied threat of a forthcoming Nader investigation of the auto clubs, the CSAA board has reluctantly introduced some token reforms. One of these concessions was the formation of a bylaws-revision committee and the subsequent adoption of a slightly improved set of bylaws. Two favorable bylaw changes are: a requirement for the disclosure of financial contributions affecting public issues, and a ten-fold reduction in the number of petition signatures

(from about 65,000 to about 6,500) required for a member to qualify as a board candidate. This drastic reduction in signatures has opened the possibility of challenging the policies of the entrenched board of directors in a contested election for the first time in the association's history.

Consequently, CSAA Reform has just selected and endorsed a reform slate of eight candidates who will run for director of the CSAA in the forthcoming annual elections. Seven of the eight reform candidates are active Sierra Club members, and all eight are committed to an association concerned about our environment, one that favors balanced transportation and is open to membership participation and control. The group's reform efforts have been unanimously endorsed by the Sierra Club Northern California Conservation Council, as well as by two other local conservation organizations: the United New Conservationists and the Committee for Green Foothills.

Members for CSAA Reform are now circulating the required petition of candidacy to qualify its reform slate and needs 8,000 CSAA member signatures. Since candidates for director must ultimately be elected by proxies, and not by conventional ballot votes, CSAA Reform is also launching a campaign to collect the proxies needed to elect its reform slate. The proxy effort will be an uphill fight against great odds, since the association establishment is using its staff and machinery to solicit proxies for its own handpicked people. Sierra Club members willing to sign and/or circulate either petitions of candidacy or proxy forms should contact Members for CSAA Reform, 363 Douglass Street, San Francisco, California 94114 (phone: evening, 415-864-4249; day, 408-734-4500). Help in obtaining petition and proxy signatures and financial contributions is urgently needed.

Bert Schwarzschild



S. JOHNSON

WASHINGTON REPORT

Beyond the Watergate

ALL THE TALK IN WASHINGTON these days is of the Watergate scandal and the implication of its ever widening revelations upon the whole course and conduct of government. Yet government still goes on, and for both legislators and environmentalists there are important matters that still require attention and energy.

The long struggle over the trans-Alaska Pipeline has nearly reached its climax in the Senate, and important strip mining and land-use bills—for which we have fought for several years—are now also entering their final stages. Several energy bills—some of which could result in environmental damage—have been introduced. Finally, the National Timber Supply Act, which we were able to defeat three years ago, surfaced again recently as a rider to the log export bill, which was reported out of the Senate Committee on Banking and Commerce even though a quorum was not present.

Thus, despite Watergate, the powerful corporations are, as always, hard at work in Washington. If anything, they probably prefer the smokescreen that Watergate provides to their efforts to advance their proposals for special favors through Congress. Our concern is that people may become disillusioned with the entire political process as a result of the Watergate affair. Whatever strength environmentalists have as a political force in this country depends on an informed, articulate, and *active* citizenry. Awareness is our first goal, and mail, telegrams, and telephone calls perhaps our most important tools. Your opinions make a great deal of difference to most senators and representatives as the time to vote on a crucial issue approaches. Ten or 20 articulate, thoughtful letters can be significant. Most congressmen face political pressures of various sorts, but the sort of misconduct represented by the current Watergate scandal is not typical and should not disillusion those who attempt to make their views heard in Washington. Despite whatever atypical behavior occurs from time to time, most congressmen are making honest judgments on the issues, and they really do want to hear from their constituents. They are more aware, too, than you might think of what various economic interests really stand for.

The importance of public participation in the legislative process was vividly demonstrated during an open session held recently by the Senate Interior Committee on the "right-of-way" legislation that would, among other things, clear the way for con-

struction of the trans-Alaska pipeline session was the first of its kind to be open to the public, and it was quite impressive to see the oil lobbyists there in force and to see their power at work. Senator Henry Jackson, once an environmental champion, is now firmly committed to the oil industry's Alaska scheme, despite its environmental consequences and the availability of preferable alternatives. But a few senators were not afraid to speak out against the pipeline despite the views of their chairman and the

CAPITOL NEWS

Interior Committee approves right-of-way for pipeline

AS CONGRESS COMES CLOSER to approving environmentally disastrous plans for the 789-mile trans-Alaska pipeline (TAPS), long-standing right-of-way limitations are being brushed aside. General right-of-way regulations affecting pipelines, transmission lines, and other facilities, which could result in the permanent disposal of hundreds of thousands of acres of public land in Alaska and other states, are being incorporated in the congressional effort to ram TAPS through.

According to Sierra Club Executive Director Mike McCloskey, "When Congress decided in 1920 to limit right-of-way access on public lands, it did so only after lengthy, careful deliberation. The record clearly shows," McCloskey said, "that the right-of-way restrictions were written into law because of Congress' belief that any other action would merely duplicate the profligate disposal of land in the West to railroads during the 19th century. Congress must again act with great caution in any right-of-way decision which would take thousands of acres out of public ownership permanently."

Last month the Senate Interior Committee voted to let the government authorize immediate approval of TAPS. The committee's complex bill sets new ground rules for utility lines crossing federally owned land, and, among other things, alters right-of-way restrictions to suit the pipeline's needs.

Chairman Henry Jackson gave top priority to the Prudhoe Bay-to-Valdez, Alaska

pressures from industry. Senators Lee Metcalf of Montana, Floyd Haskell of Colorado, and James Abourezk of South Dakota fought for and voted for a rational Alaska policy—but to no avail. Yet their stand was a brave one for which they deserve our thanks. Their willingness to stand against the current of opinion in the committee was no doubt greatly encouraged by those of you who took the time to let them know how you felt.

We must not lose faith in the process. It is still there, and it still works. The best thing that could happen for the special interests would be for us to turn our backs on the political process. We can still prevail if enough of us continue to care and communicate. To paraphrase a well-known slogan: "A nation that runs on full and free information cannot afford to run short."

Brock Evans

route and placed the proposed Canadian alternative on a diplomatic back burner. Jackson noted that plans for TAPS are at "an advanced state," but included an authorization for the President to start "early negotiations" with Canada for a possible second pipeline through Canada to the Midwest. During the committee's open drafting session, Jackson said that both routes may be needed someday, but that the Canadian route "will take a long time" to establish.

The decision of the western-dominated Interior Committee to support TAPS was challenged by Midwesterners when the right-of-way bill reached the Senate floor. There is some concern that the daily two million barrels of TAPS oil would create a surplus on the West Coast. It appears that it would be more economical to ship this surplus to Japan than to send it to the oil-scarce East and Midwest. In return for such exports, U.S. oil companies would receive government "tickets" to import foreign oil and sell it at higher prices to consumers in the East and Midwest.

Jackson's pro-TAPS position coincides with that of Interior Secretary Rogers Morton, who responded to a group of congressmen interested in the Canadian alternative by staunchly defending the TAPS route for reasons ranging from time to national security. A *Los Angeles Times* story, however, reports that the Interior Department's own environmental impact study of TAPS, upon which Morton bases his conclusions, concedes that the Alaska route has considerable

EDITORIAL

The Making of an Energy Crisis

SHORTLY AFTER PRESIDENT NIXON took office, he advised the press and the public to judge him not by what he said but rather by what he did. In that light, it is interesting to analyze his recent energy message to compare its general statements of policy with its specific program proposals.

The President called for increased domestic production of all forms of energy. He backed this up with specific proposals to discontinue regulation of the price of natural gas at the wellhead; to triple the annual acreage on the outer continental shelf leased for oil and gas production; to remove legal obstacles to the trans-Alaska pipeline; to proceed "if the environmental risks are acceptable" with oil shale and geothermal leasing programs; to expand the use of coal, even at the cost of delays in meeting clean-air standards and a probable deterioration of air quality in regions with air that is now relatively clean; to expedite the construction and licensing of nuclear plants; and to further increase tax subsidies to the oil and gas industry.

In order to smooth the way for increased imports of fuels, the President has ended the oil import quota system and has proposed legislation which would enable the federal government to license superports beyond the three-mile limit, even over the objections of adjacent states concerned with protecting their waters and shores.

The President says that "We must direct equal attention to conserving the energy available to us today, and we must explore means to limit future growth in energy demands." But what are his specific proposals? He has established an Office of Energy Conservation in the Department of the Interior, the same department responsible for developing energy supplies. The office will have no significant power or authority. He further proposes a voluntary system of energy-efficiency labels for major home appliances. He did reiterate his support for use of Highway Trust Fund money for mass transit purposes, but environmentalists active in that cause have criticized the White House for not exercising its full influence in the recent votes in Congress.

Ironically, the President makes a statement which is quite similar to a major element of the Sierra Club's energy policy. He says, "... We should recognize that the single most effective means of encouraging energy conservation is to insure that energy prices reflect their true costs." If the President had been serious about this, of course, he would have proposed a number of measures not desired by the energy industry, and that he was not prepared to do. One is led to speculate that the heavy campaign contributions from energy industry executives added to his reluctance to act, except on initiatives now favored by most industry, such as the ending of quotas and price regulations.

What might the President have proposed if he had meant what he said? He would have called for ending, not increasing, economic and tax subsidies now going to the energy industry. These include depletion allowances; the write-off of "intangible drilling costs"; the deduction from U.S. taxes of what are, in effect, royalties or interests in ownership paid for foreign oil; and the tanker subsidy program.

He would have insisted that social and environmental costs be paid by the industry and the consumer of energy, not by the taxpayer and the victim. He would have proposed that the coal industry assume the burden (about \$1.5 billion this year) of compensating the victims of black-lung disease; this money now comes from the U.S. Treasury. He would have given strong support to charges or taxes on the emission of pollutants to the air and water. He would have proposed that the limited liability provisions of the Price-Anderson Act be repealed, so that in the event of a major accident involving a nuclear plant the victims would be compensated by the industry, either directly or indirectly through insurance it would purchase. Finally, the President would have proposed that electric and gas price structures be changed so that users of large amounts of energy would not get it, as they do now, at less than the cost of developing it from new supplies and facilities.

The message, then, is unbalanced and inadequate. The action now shifts to the Congress, where the current prospects are not especially favorable. If we are to change our energy policies to curb run-away demand, all of us will have to better inform ourselves and others, including our representatives in Congress, of the underlying reasons for our energy problems.

In short, the nation's current energy policies, even as modified by the President's proposals, are a prescription for the problem, not its solution. Those concerned with the quality of the environment can expect to be treated as scapegoats, where, in fact, if government and industry had wanted to make an energy crisis, they couldn't have picked a better way to do it.

Laurence I. Moss

ecological drawbacks. "In draft form," the *Times* reports, the department's report "actually called the Canadian route superior, but Morton deleted this conclusion from the final statement."

Many witnesses appeared before the Senate Interior Committee to oppose TAPS and urge an impartial study of a Canadian alternative. Dr. Robert Curry, associate professor of environmental geology at the University of Montana and formerly a member of the geological survey study team on TAPS, said that "geological and hydrological data overwhelmingly favor MacKenzie Valley routes" in Canada. Curry accused Morton of using "serious misinformation" as the basis for his comments on the environmental impact of the various routes. He also said: "Morton's letter to congressmen illustrates some misconceptions about the geology of the two routes that cause me to seriously doubt that he has the ability to grasp these technical matters sufficiently to assure his capability to attach adequate environmental and technical stipulations to any arctic pipeline permit, no matter where constructed. The factual and implied errors are so overwhelmingly incorrect that they must be challenged in open scientific forum. There seems little reason to continue Alaskan pipeline proposals except as a favor to energy company interests who would stand to make the greatest short-term profit from the Alaskan route."

Sulfur pollution tax stalled in Congress

Several recent developments have strongly underlined the need for the sulfur pollution tax proposed by Congressmen Les Aspin and Charles Vanik (H.R. 7123). A recent study conducted by the Community Health and Environmental Surveillance System for the Environmental Protection Agency (EPA) reported that the effect of sulfur pollution on the cardio-respiratory system is so serious that the health of U.S. citizens may not be adequately protected even if the primary air quality standards of the 1970 Clean Air Act are met by 1975. Also, the April 3 *Washington Post* disclosed an internal EPA



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memorandum proposing that the Administration attempt to prevent states from surpassing the primary air quality standards for sulfur. Reportedly, however, studies of state Clean Air Act implementation plans indicate that enforcement at the state level is, in most cases, so ineffectual that any federal attempts at obstructionism are totally unnecessary.

These enforcement problems suggest that new authority is needed to supplement the machinery created by the Clean Air Act. Because the sulfur tax is relatively invulnerable to bureaucratic subversion by the EPA or state air pollution control agencies, it seems a logical solution to present difficulties.

The 1973 version of the sulfur pollution tax bill was recently introduced in the House, but its introduction raises the question of whether the Nixon Administration, which supports the tax in theory, is going to do anything to push the bill. As recently as February, in his environmental message, President Nixon endorsed the general idea behind pollution taxes—that the consumer should pay for the pollution of the air and water caused by his demand for a product. In the specific instance of sulfur, this means the tax must be set high enough that industries and utilities would find it cheaper to control sulfur emissions than to pay the tax, thus adding as little as possible to the cost of production. Such a tax would create an economic incentive for a polluter to control emissions efficiently.

The Aspin-Vanik bill would amend the Internal Revenue Service Code to impose an excise tax on fuels containing sulfur and on certain emissions of sulfur oxides. "The real way to enforce the Clean Air Act is to tax the profits out of pollution," the Congressmen said. "When a polluter must pay 20 cents for each pound of sulfur emitted, there will be a strong incentive to cut pollution."

Efforts to act on the bill have run into a roadblock from the Administration. House Ways and Means Committee Chairman Wilbur Mills said hearings on the proposal will be held only if he gets indications from the Administration that this is a priority item. Not only have there been no such signals from the supposedly supportive White House, but last year the Administration didn't even put out sufficient effort to find a Republican to introduce its own version of the sulfur tax.

State land-use policies may be regulated by federal legislation

Land-use legislation continues on a stop-and-go course through Congress. Touted by its supporters as a national land-use policy, the bills under consideration are actually

aimed primarily at institutional reform of state land-use planning and management, requiring states, without the guidance of substantive federal policy, to identify and control certain critical areas and uses, as defined by the state within broad general guidelines. Substantive policies are placed in the legislation only with regard to areas the Interior Department designates "of critical environmental concern or which are of more than statewide significance."

Key issues at stake as the Interior Committees of both houses hash out the bills are the energy industry's proposal that the Interior Department be allowed to force states to provide "adequate consideration of national needs for particular key facilities," thus providing the federal government with an open-ended invitation for the development of energy-related projects like strip mines, offshore oil rigs, and power plants; how and to what extent a state will be penalized for failure to comply with act requirements and the federal government's role in such sanctions; and state regulation of second-home and large-scale subdivisions with a permit system to assure their compliance with environmental standards and to assure the availability of vital public services such as sewers.

NEWS VIEW

Forest Service lobbies for logs in Alaska rural communities

COMMERCIAL LOGGING interests mounted an intensive campaign to claim a large share of the 80 million prime acres of Alaska that are to be divided and set aside as national parks, national fish and wildlife refuges, national forests, or national scenic and wild rivers. Local hearings of the joint Federal-State Land Use Planning Commission on Alaska, created by Congress to hear the public's views before Interior Secretary Rogers-Morton makes his final recommendations, are being heavily influenced by the Forest Service on behalf of the timber industry, which wants logging rights in the southern portion of the state.

Sierra Club Alaska Representative Jack Hession said: "Records coming in from the first two weeks of the commission's hearings in rural Alaska reveal that the Forest Service has been actively lobbying communities and villages near or within proposed national forests. Public meetings have been held by the foresters prior to the arrival of the commission in order to explain the delights of "multiple use" under Forest Service Management (which would allow logging).

"As a result, the commission has been getting overwhelming testimony in favor of national forests and 'multiple use.' This, in

Highway Trust Fund jammed in Congress

Controversy continues to swirl around the Federal-Aid to Highways bill (S. 502), focal point for the Highway Trust Fund. Mass transit advocates confront the highway lobby while environmentalists fight to keep freeways out of parks, to stop road-builders from inaugurating superfluous new highway systems, to insure continued billboard removal, and to enhance Clean Air Act provisions.

Since the House and Senate passed the bill in altogether different forms, the central issue before the conference committee remains whether to allow urban areas to spend their portion of highway trust money on mass transportation as the Senate bill provides or to restrict trust money to road construction as the House desires.

A similar dilemma last year resulted in no highway bill at all after the conferees became deadlocked. Consequently, passage of this year's bill is regarded as imperative. However, the possibility remains that the compromise bill will be unacceptable to a majority of congressmen or that President Nixon will veto it for budgetary reasons.

effect, represents sabotage of the commission's expressed goal of seeking the views of the Alaska public on land use independent of agency jurisdictions.

"Another question of fair play is also involved. Until the Interior Department submits its proposals for the 80 million acres to Congress, its special study teams from the National Park Service, Forest Service, Bureau of Sports Fisheries and Wildlife, and Bureau of Outdoor Recreation are under



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orders not to reveal their proposals, many of which are still not completed. The Forest Service, however, during the course of its field studies, conducted a hard-sell campaign with local residents which included mentioning specific Forest Service proposals for national forests.

"Areas being sought by the Forest Service include areas originally withdrawn by the Interior Department as potential national parks in the Wrangell Mountains, Central Brooks Range and Lake Clark-Iliamna region, and potential wildlife refuges in interior Alaska."

The 80 million acres at stake offer superlative values for future national parks and wildlife refuges. The land, which could encompass all of New England, New York, New Jersey, and Delaware, includes America's highest mountain range, longest wild river, and largest glacier. Many of the birds that visit the "lower 48" states breed there. Vast herds of caribou and much other wildlife abound.

As provided in the Alaskan Native Claims Settlement Act of 1971, Secretary Morton last September withdrew the federal Alaskan lands for study as possible areas to be included in the parks, wildlife, forests, or wild rivers systems. Hearings in San Francisco, Denver, Seattle and Washington, D.C., as well as those in Alaska, give the public a chance to be heard. However, the most conspicuous controversies involve the amount of land to be opened to logging operations, and which governmental agencies will control the various areas. Morton is expected to submit his recommendations to Congress in December.

As Sierra Club Alaska Task Force head Dr. Edgar Wayburn commented: "The whole future of Alaska is at stake."

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Laurence I. Moss elected Sierra Club president

Laurence I. Moss was elected Sierra Club President last month at the annual organizational meeting of the Board of Directors. Moss, a Washington, D.C., nuclear engineer, is the first president in the Club's 80-year history to reside outside California. A director since 1968, he has been associated with the campaign to prevent dams in the Grand Canyon, the Coalition Against the SST, the Coalition to Tax Pollution, and the Club's anti-degradation air quality suit currently before the Supreme Court.

Also named to the Executive Committee were Vice President Kent Gill of Davis, California; Secretary June Viavant of Salt Lake City, Utah; Treasurer E. Paul Swatek of Somerville, Massachusetts; and Fifth Officer Raymond Sherwin, the outgoing president from Vallejo, California.

Among the major issues considered by the newly constituted board, the upcoming international discussions on the law of the sea was the first topic. The resolution adopted, believed to be the first by any conservation group, favored the application of international environmental standards over the open sea as well as within any "economic resource zone" that may be decided upon during the future negotiations. The Club opposed any unilateral claims by any nation over the sea and proposed that an international system of environmental analysis be required prior to any deep sea mining. The directors took no position on the much-disputed width of territorial seas or proposed economic resource zones on the grounds that environmental protection should be a part of any new plan. The Club opposed the "flags-of-convenience" principle that has allowed certain nations to be havens for poorly regulated and poorly designed vessels.

The land-use policy adopted by the board calls for a long-range "systematic and comprehensive approach to land-use planning," giving "full consideration to all social, economic, historical and cultural factors, as well as to all relevant natural environmental factors and constraints." State and regional planning programs should function in concert with federal planning and provide for public participation.

Regarding wilderness designations, the directors resolved that it is necessary to designate as wilderness study areas "all areas known to the public which appear to possess wilderness qualities" and that such areas must have "complete interim protection until final decisions are made on them by the Congress." The directors also recommended the establishment of wilderness areas on Bureau of Land Management lands that are of wilderness quality, but they opposed inappropriate alternative designations for wilderness areas (such as "Back

Country" or "Zone of Solitude").

In other actions, the formation of an Ontario Sierra Club Chapter was authorized, UNESCO's Convention for the Protection of the World and Cultural and Natural Heritage was commended, the designation of June 5 as World Environment Day was supported, an archeological salvage bill was supported that would protect "historic and prehistoric archeological sites," and a statement was adopted suggesting specific environmental criteria for assessing any new or expanded ski facilities.

Legislation would tax highway gas hogs

When the smog season arrives and energy sources become increasingly uncertain, gasoline prices skyrocket and attention again focuses on the most conspicuous offender—the automobile. Several noteworthy measures have been introduced in Congress in an attempt to deal with problems posed by the auto.

Ohio Representative Charles Vanik, co-author of the sulfur pollution tax bill, has put forward a "consumer protection bill" (H.R. 7531), designed to prod Americans into demanding and buying smaller, more efficient cars. Beginning July 1, 1976, under the Vanik bill, a "fuel economy excise tax" would be imposed on new cars, based on how much gasoline they consume. The Environmental Protection Agency would test and rate the consumption of each new-model car, and the U.S. Treasury would levy a graduated tax based on the results. Cars getting more than 20 miles per gallon would pay no tax, but a car getting 10 miles per gallon would pay \$96. A luxury vehicle whose power facilities dragged its efficiency down to seven miles per gallon would carry a \$256 tax.

Vanik chides carmakers for "dragging their feet on this vital matter" of reducing gasoline consumption when an energy shortage seems apparent. "If," he continues,

continued on page 26

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REGIONAL REPS REPORT

Midwest: Michigan's Upper Peninsula

SOMEWHERE IN THE RANGE of our organization's activities, lying in the spectrum between saving a specific wilderness area and saving the world, is the challenge of preserving the natural and humane qualities of particular large but distinct units of territory. Certain regions have a mystique, a unity of theme but diversity of splendors, that makes them both identifiable and worthy of protection from the crass abuses to the human spirit that pound away at us at our normal abodes.

One such place is Michigan's Upper Peninsula. The U.P., as it is popularly known, is completely surrounded by the waters of the Great Lakes, except for its southern boundary with Wisconsin. Throughout its history, the Upper Peninsula has maintained a character all its own, refusing to be absorbed culturally by either lower Michigan or Wisconsin. Today the U.P. contains a great concentration of natural and historical features.

Foremost, perhaps, is the region's close association with the Great Lakes. The U.P. touches three of the lakes, and each stretch of shoreline is distinctive. Fortunately, significant stretches are in public ownership, including the Pictured Rocks National Lakeshore. This unit of the national park system, still in the process of acquisition and development, is about equally divided between high, colorful rock bluffs, long stretches of sandy beach backed by unusually attractive forests, and the magnificent and immense Grand Sable Sand Dunes. It is surely one of the finest stretches of shoreline real estate in the country, and it must not be permitted to be overdeveloped and ruined. Other publicly owned areas of shoreline include the Porcupine Mountains Wilderness State Park—most of which is formally dedicated as wilderness—and portions of the Hiawatha and Ottawa national forests. The lakes, of course, provide an abundant fishery, featuring Lake Trout of unequalled succulence. Dotted along the shorelines are small fishing villages, which manage to keep their distinctiveness in spite of an increasing tourist trade.

Inland, the terrain is equally fine. There are many wild and unspoiled areas, including the famous Sylvania tract in the Ottawa National Forest and several areas that are currently being proposed for wilderness under both state and federal law. There is an abundance of wild rivers, most of which are clear, though colored a coppery brown from the tannic acid that leaches into the water of the upstream bogs. One of these streams, the

Tahquamenon, passes over a falls that is surpassed in magnitude in the East only by Niagara.

But the Upper Peninsula is much more than a catalogue of delights. It has a romantic aura that includes the works of man as well as nature. Numerous spots have been immortalized nationally: the Two Hearted River is famous as one of Hemingway's favorite fishing streams, and it was off Little Girl Point that Jimmy Gatz of North Dakota met Dan Cody and began his transformation into Jay Gatsby of West Egg. With some glaring exceptions, even the ravages of past logging and mining have blurred into the present, and contribute to the cultural interest of the region.

Though man appears to have forgotten to spoil the Upper Peninsula, he is beginning to wake up. Numerous threats to the integrity of the area are emerging.

- Pressures are strong for bigger and better highways, including a four-lane "development highway" that would traverse the length of the Peninsula.
- Second-home subdivisions pose a real threat, particularly on the beautiful Keweenaw Peninsula where there are immense consolidated land holdings dating from the time when that area produced most of the nation's copper.
- Interest in mining is reviving, with a major new iron mine being opened near Ishpeming, and the economics of copper favoring a new look at abandoned mines on the Keweenaw.
- Certain U.P. politicians are attempting to interest the Navy in constructing its absurd Project Sanguine in the area.
- Numerous individual acts of insensitivity are chipping away at the region. The U.S.

Forest Service, for example, in an inexplicable spasm of folly, has rammed a major new road closely paralleling the south shore of Whitefish Bay, naming it the Big Sea Water Highway.

In short, the Upper Peninsula is in danger of being homogenized into the mainstream of American drabness.

Such an outcome would be tragic, but efforts to forestall destruction must take into account a central fact about the U.P.: the region is not only beautiful, it is also poor. Wave after wave of exploitative boom-times have passed over the peninsula—logging, marginal farming of cutover lands, copper mining, iron mining—leaving a populace swollen in numbers, but with little opportunity for present employment. Today only iron mining maintains a significant vestige of past activities, for the old-growth timber is gone, the small marginal farms cannot compete, and only one copper mine remains open. It is not surprising that local politicians grasp for any opportunity to increase development, even if that development would have a devastating effect on the cultural and physical integrity of the peninsula.

It is clear that thoughtless development will be the death of the U.P. It is not so clear what can be done about it. Environmentalists from outside the area must recognize that basically the solution must come from U.P. residents themselves. It is easy to slip into the arrogance of assuming that the Upper Peninsula can be saved from Lansing or Detroit, or for that matter, from Chicago or Milwaukee, but such arrogance is rightly resented by U.P. residents. Fortunately, the Peninsula is undergoing an environmental awakening, and numerous locally based groups are becoming increasingly concerned and vocal.

The days of the ethic of growth for growth's sake are probably limited in the U.P., but the large problem of reconciling preservation of the area's qualities while scoring advances against poverty will remain.

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Alaska (continued)

spectacular of the North American Continent. Lands presently classified as d-1 in the Chitina River Valley and the Chisana-Nabesna country should be added to the park complex. These are the gateway lands, easier of access and more habitable for the visitor. [about 15 million acres.]

3. North and south extensions of Mt. McKinley National Park, necessary if the park is to become truly representative of the central Alaska Range and protect critical habitat of park animals. On the north, about two million acres must be added to the park if its wide-ranging wolf, grizzly, Dall sheep, and caribou populations and their habitat are to be preserved. Similarly, a critical summer range for the McKinley caribou herd is one of the reasons for a southern extension. Approximately another two million acres on the south would include the stupendous glacial systems (including a presently excluded flank of Mt. McKinley itself), usable alpine country, and forested lowlands not now protected by park status. [about 4 million acres.]

4. Reclassification and north and

south boundary extensions of Katmai National Monument to include complete watersheds and thereby guarantee that brown bear habitat and populations would be preserved. [about 1.5 million acres.]

5. Establishment of Kobuk Dunes National Park south of the Noatak Wildlands. This sand dune area contains unique and varied habitats, which support a diverse population of wildlife and unusual opportunity for the wilderness visitor. [about 1.5 million acres.]

6. Establishment of Yukon-Charley River National Park to commemorate some of the unique history of Alaska on the Yukon and provide opportunity for wilderness recreation on and around the Charley River in a kind of area presently unrepresented in the National Park System. [about 2.7 million acres.]

7. Establishment of Aniakchak Crater National Park of at least 800,000 acres. This naturally isolated world, with a varied environment within the walls of a collapsed caldera, has a variety of wildlife, including brown bear, caribou, moose, small mammals and birds.

8. Establishment of the Alaska Peninsula Wildlife Refuge on the east side of the Alaska Peninsula between Katmai National Monument and Stepovak Bay. This area is noted for Alaska brown bear and could compensate for the loss of that part of the Kodiak Wildlife Refuge subject to Native Village Selection. [1.5 million acres.]

9. Establishment of Lake Clark-Lake Iliamna National Park and Wildlands, a regional complex southwest of Anchorage, containing a great variety of resources and values within a patchwork land selection pattern. It would overlap the southern end of the Alaska Range and the northern end of the Aleutian Range. It contains magnificent scenery and a variety of wildlife. The salmon resource is possibly the finest in Alaska and its preservation is essential. The d-2 and d-1 lands should be managed by both the Bureau of Sport Fisheries and the National Park Service. [about 5.3 million acres.]

10. Establishment of a Yukon Flats National Wildlife Refuge in one of the richest waterfowl producing areas in North America, which supports over two million migrating ducks yearly,

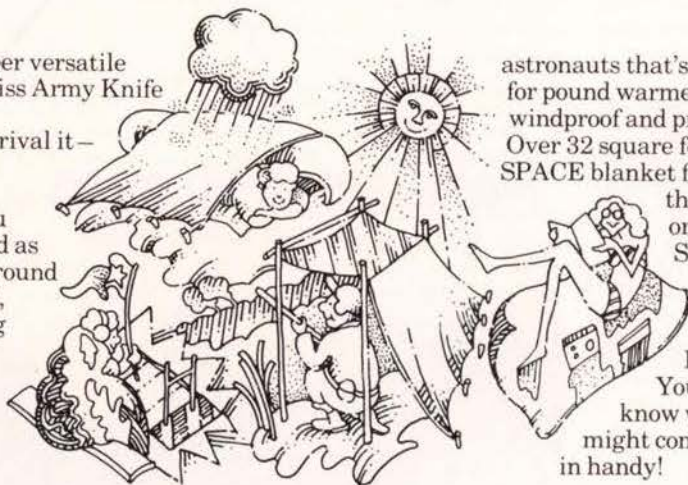
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Once a hunting encampment, Anaktuvak, in the Brooks Range, is now a Native townsite with sod huts and snowmobiles.

along with a wide variety of other wildlife, including the rare peregrine falcon. [about 15 million acres.]

11. A southern and western extension of the Arctic Wildlife Range. The boundary was originally set along river banks, thus protecting only half the watershed necessary for the wide ranging animals it was established to protect. The Range should abut the Yukon Flats Wildlife refuge on the south and extend to the hydrographic divide of the Canning River on the west, thus insuring the existence of the Porcupine Caribou herd. [about 4.5 million acres.]

12. Establishment of the Noatak National Wildlands contiguous with the proposed Gates of the Arctic Park. This area offers our last opportunity to protect a complete watershed of this magnitude for our nation. Management would be by the Department of the Interior, with both National Park Service and Bureau of Sport Fisheries participating. [about 9 million acres.]

13. Establishment of the Imuruk National Park and Wildlands, on the north and west of the Seward Peninsula, an area with highly significant ecological, geological, and archeological values. The evidence to date suggests that the land bridge between Asia and America extended here, and there is evidence of past vulcanism and glaciation. [about 3 million acres.]

14. Establishment of the Yukon-Kuskokwim Wildlife Refuges, four new waterfowl refuges along the lower Yukon River Valley. The most im-

portant are the Yukon Flats at the bend of the Yukon, and the additions to the Clarence Rhode National Wildlife Refuge in the delta. The Yukon Flats is the single most productive waterfowl habitat in the state. [about 6 million acres.]

15. Establishment of the Togiak River Wildlands extending from the Wood River-Tikchik Lakes west to Bristol Bay and Togiak Bay in Western Alaska. This unit forms an ecosystem which rises from sea level to the top of a 5,000-foot watershed and encloses a diverse fish and wildlife resource. It has additional value be-

cause it connects the existing Cape Newenham National Wildlife Refuge and three replacement refuges. [about 3 million acres.]

16. The establishment of the Selawik National Wildlife Refuge in northwest Alaska, an extremely productive waterfowl terrain, which furnishes, in addition, a wintering ground for the Arctic Caribou herd. Subsistence fishing is important to the Eskimo population. [2 million acres.]

17. Smaller areas withdrawn as d-2 lands, including the proposed Kenai Fjords National Park and several small wildlife refuges for migratory waterfowl and marine mammals. [500,000 acres.]

The total acreage of these public domain lands proposed for protection in Alaska comes to slightly over 80 million. With a population of 203 million American citizens, this averages out to about 2/5 of an acre per person. The terms of the Native Claims Settlement Act, by contrast, allot each Alaskan Native about 550 acres (assuming a native population of about 75,000). By the terms of statehood, each Alaskan will have some 410 acres of state land at his disposal (based on a state population of 365,000, including Natives).

But many Alaskans, whether they have lived in the state 25 years or 6 months, are screaming that the d-2 lands are "another federal land grab." And as the so-called energy crisis

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grows, and with it the pressures to get out the oil, the issues of immediate exploitation versus preservation are joined.

As the late spring days grow ever longer, the busy streets of Anchorage are beginning to hum again with talk of oil, new jobs, and money—and the "outsiders" who are holding things up. While the State Chamber of Commerce is touring the "lower 48" with the message that "America needs ALASKA'S oil—NOW," bumper stickers in the Anchorage area (where nearly half the state's total population lives) say "SIERRA GO HOME!". (A few—a very few—say "WELCOME SIERRA.")

The fact is, of course, that Alaska is not a sovereign nation, much as it might like to be (if it wouldn't have to foot the bills). It is the 49th state of the Union. Legally, its public lands belong as much to the children of Los Angeles and New York as to those of Juneau, Fairbanks and Barrow. In reality, Alaska belongs to no person or persons, as the first Americans knew far better than we. The Great Land is ours to visit and use during our brief lifetimes. And, at this crucial point in time, it is ours to care for or destroy. So what is really at stake in this last battle for Alaska is not only the wilderness, but a measure of our wisdom. If we allow Alaska to go the way the West went 100 years ago, no one will call it Seward's Folly—which clearly it never was—but ours.

News View (Continued)

"America's 92.7 million passenger cars could increase in efficiency from 12 miles per gallon to 18 miles per gallon, the nation could save over 25 billion gallons of gasoline per year."

Detroit's answer is that Americans demand large cars. Record sales chalked up by the industry in the first quarter of this year show consumers opting for large engines and power accessories, all of which use more gasoline. However, a recent study, cited by the Coalition to Tax Pollution, supports Vanik's contention that a more costly auto would deter consumers from buying it.

Another bill (H.R. 6640) by Florida Representative Dante Fascell proposes limited tax benefits "be made available to commuters commuting to and from their places of employment in carpools. The benefits would be in the form of deductions actually incurred for unreimbursed automobile operating costs and parking fees."

Under Fascell's bill, a car-owner who transports two or more people "part way or all the way to or from their places of employ-

ment" would deduct from his taxes 12 cents for each of the first 15,000 miles, 9 cents for each additional mile, and all parking expenses.

Senators John Tunney of California and Warren Magnuson of Washington held hearings last month on their "Automotive Transport Research and Development Act of 1973" (S. 1055), that would provide federal research and development funds "to develop economical, commercially feasible, low-emission alternatives to the internal combustion engine currently mass-produced and used in the United States. It is believed that this bill will be amended to provide for financing of the project through an auto emissions or fuel consumption tax, either of which would be more in line with the position of many conservationists and the Environmental Protection Agency.

At the hearings, a succession of engine-designers said that with proper funding a low-pollution, low-fuel-consumption alternative to the conventional automobile engine could be fully developed in three to four years.

**Loggers devastate
Oregon's Thomas Creek**

Atrocious logging practices at Thomas Creek near Salem, Oregon, have prompted the Sierra Club to call for an investigation by Oregon's Department of Environmental Quality.

Sierra Club Northwest Representative Roger Mellem said the formerly picturesque 12-mile river valley that drains into the Willamette River had been devastated. The upper valley, owned by a number of companies, including Weyerhaeuser and U.S. Plywood, was the scene of "another cut-and-run Molalla Valley operation," he continued. Molalla Valley was a 32,000-acre

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watershed that was stripped bare by Weyerhaeuser in a cut-and-run action that received wide publicity throughout the state last year.

"Less than 15 years ago this was a virgin valley," Mellem said. "Now its upper part is devoid of standing timber, the creek itself has been logged and roaded over carelessly, and the destruction is still going on. In fact, Weyerhaeuser apparently logged a long strip on both sides of the creek as long ago as 1969-70. No buffer strip has been left at all."

A contributing factor that encourages such outrageous logging is Oregon's new Forest Practices Act, which "is concerned only with the maintenance of very minimal standards," Mellem said.

Dr. Strangelove returns: Australia and Colorado endure new atomic blasts

Australian unions began a country-wide ban on French goods, ships, aircraft, and communications last month to protest the resumption of French nuclear tests in the South Pacific. Elliott V. Elliott, president of the Seamen's Union of Australia, said that members had overwhelmingly approved a resolution calling for "a policy of harassment to any French shipping in any Australian port" to protest the Mururoa Atoll tests about 5,000 miles east of Australia. The Seamen's Union was the first to take action against France.

Australian Prime Minister Gough Whitlam told the Australian House of Representatives that scientific reports established clearly that previous French tests had contaminated the Australian environment with radioactive fallout: "The reports establish that the people of Australia may have been adversely affected. Therefore, we are initiating proceedings against France in the International Court of Justice." New Zealand Prime Minister Norman Kirk previously announced his intention to take France to the International Court of Justice.

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The United States, meanwhile, which joined the foreign secretaries of Australia and New Zealand last year in expressing opposition to France's atmospheric tests, turned aside conservationists' protests and detonated three 30-kiloton nuclear devices at an underground site about 175 miles northwest of Denver, Colorado. Project Rio Blanco, the blast's official name, was designed to free natural gas trapped in deep underground rock formations.

With a total explosive force of 90,000 tons of TNT, the three nuclear bombs could conceivably contaminate the water supply for 27 million persons, conservationists believe. Furthermore, geologists estimated that from 5,800 to 12,620 such nuclear detonations would be required to fully develop the deep natural gas fields under Wyoming, Colorado, Utah, Arizona, and New Mexico. To do that, scientists and critics argue, would seriously risk poisoning with radioactive debris the water supply of most of the western half of the U.S. for several decades.

In a letter to President Nixon, the Sierra Club and ten other conservation groups pointed out that "the environmental problems of seismic damage, the release of radioactivity into the biosphere by flaring of gas, the possibility that there will be contamination of the mobile ground water that will eventually travel to the Colorado River, present unacceptable risks for which no corresponding long-term benefits have been established."

Computer camping plan for six national parks

Overcrowded camping conditions have prompted a pilot campsite reservation system in six national parks—Yosemite, Yellowstone, Grand Teton, Everglades, Grand Canyon, and Acadia. National Park Service Director Ronald Walker last month announced the signing of a contract with American Express Reservations to test a computerized system that will cover 4,000 of the more than 7,000 campsites in the six parks. The other sites will still be available on a first-come, first-served basis.

American Express expected to begin taking reservations on May 20. Telephone reservations may be made through their offices in New York City, Chicago, Memphis, Houston, Phoenix, Dallas, Fort Worth, and San Francisco, and by mail order obtained from company travel offices, Ramada Inns, and many Hertz offices. Campers will pay a \$1.50 service charge regardless of length of stay, in addition to the usual \$2 to \$4 a night for the campsite.

Some state park systems such as California's have also adopted computerized reservation systems that utilize commercial outlets like Ticketron. Also, individual campgrounds may require advance reservations for group campsites.



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1974 FOREIGN OUTINGS

The hot, scented plains of East Africa, the stupendous scenery of the Himalayas, and the empty stretches of Patagonia may seem very far afield indeed to some Sierra Club members, who may wonder why the club sponsors such trips. But after all, it is One World, and there are many areas in it whose unique values are known to almost no one. Veterans of these trips will come away with new insights, and hopefully, a new commitment to the ideas the club is urging at the United Nations.



Dhaulagiri by Wayne Woodruff

● **321—LA PAZ BOAT TRIP, MEX.**

February 5-15. Leader, Jim Dodds, 2013 Skycrest Dr., #1, Walnut Creek, CA 94595.

Deserted off-shore islands and forests of giant cactus feature our trip to remote Baja California Sur. Eight-passenger, 38-ft. fishing cruisers with Mexican crews provide transportation, with three nights in luxurious hotels and nine camping on remote, serene beaches. February is springtime in Baja, ideal for swimming, fishing and beachcombing. Cost will be about \$500 from La Paz.

● **GALAPAGOS ISLANDS, ECUADOR**

(330) February and (357) May. Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611.

The Galapagos have stirred men's imagination since Darwin's visit. Distinctive adaptations in wildlife can be observed in many species. We will see the famous marine iguanas on their sun-beaten lava cliffs, their land cousins and the great tortoises, Darwin's finches, and baby sea lions. Blue lagoons and quiet coves offer swimming and snorkeling. Excursions and overnight hikes will visit volcanoes, rain forests and the Darwin Research Station.

● **318—NEW ZEALAND RAMBLE**

February 4-March 3. Leader, Michael Passovoy, 720 Rambler Road, Merced, CA 95340.

This camping and tramping tour of New Zealand's vast, sparsely populated land offers great variety . . . from high deserts to tropical fern forests, from spectacular mountains to geothermal areas. We will take the 4-day Milford Track, "the most beautiful walk in the world"; the Routeburn Track and other hikes. We'll ride in mini-buses, and stop in camps usually with stoves and showers, with a weekly hotel stay. \$700 plus air fare.

● **324—MICRONESIA**

February & March. Leader, John Edginton, 1508 Fernwood Drive, Oakland, CA 94611.

Micronesia's atolls and brooding "high islands" offer environments varying from rain forest to almost-desert beaches, and offer unique snorkeling and diving. Travel by plane, small boat, and by foot; sleep in everything from tents to hotels; eat foods varying from familiar freeze-dry to native feasts. Our National Park Service is trying to set aside land and ocean preserves in these islands. Learn the facts, and help. Cost, about \$1200 from Hawaii.

● **KENYA AND TANZANIA**

(327) February and (351) summer. Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611.

Quartering East Africa, these 25-day trips will include areas from Kilimanjaro to the Great Rift Valley, from Lake Victoria to the Indian Ocean. We will see fantastic quantities of game animals and birds in Serengeti and Ngorongoro in Tanzania, Mara Masi and Amboseli reserves in Kenya. Camping will be in beautiful natural surroundings as we travel by landrover, with some hiking.

● **315—PATAGONIA**

March. Leader, Harold Seielstad, 709 Seminole Way, Palo Alto, CA 94303.

We will cover nearly 1000 miles by car, beginning at Buenos Aires and visiting the Strait of Magellan. A possible 1-week trip may visit the Falklands. This is a wild and little-traveled area, at times scoured by strong winds, the road winding through a spectacular country of lakes, glaciers and mountains. Hiking trips are planned to the Paine and Fitzroy mountains. Over-nights will be in primitive hotels or tents. For the adventurous!

● **317—ARUN VALLEY, NEPAL**

March. Leader, Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611.

At 7500 feet, the Arun Valley nestles among mountains that tower 20,000 feet above it. The valley is geographically much older than the Himalayas and its diversified flora and fauna ranges from snow leopards and rhododendrons to peacocks and sal trees as the valley drops to 2000 feet. This moderate trek is intended for the student of natural history and will include a naturalist (and, hopefully, someone who can teach Nepali.)

● **333—TRISULI VALLEY, NEPAL**

April-May. Leader, Betty Osborn, 515 Shasta Way, Mill Valley, CA 94941.

Three weeks of moderate hiking north of Kathmandu in the beautiful Mailung Khola and Trisuli valleys, separated by a 12,500-foot pass. A base camp in the Gatlang Valley will coincide with full bloom on the rhododendrons and with the spring bird migration. A naturalist will accompany the trip. Our route will pass through many primitive and seldom-visited Thamang villages, with a backdrop of 23,000-foot peaks. See **SCB** October 1970.

● **PUERTO VALLARTA BOAT TRIP**

(335) May 6-18 and (373) November 4-16. Ellis Rother, 671 Laurel St., San Carlos, CA 94070.

After two full days for shopping in Puerto Vallarta, Mexico, we will embark on native fishing pangas to float along a hundred tropical miles of sparkling ocean, teeming with bird and fish life. We sleep and eat on vast moonlit beaches and visit remote fishing villages. Ten days of escape—hiking, swimming, surfing, snorkeling, or just lazing away the time. Active, but within the abilities of any healthy person.

● **336—PAPUAN NEW GUINEA**
May 18-June 22. Leader, Willis Moore, c/o Bishop Museum, Honolulu, HI 96918.

A climb to the 15,000-foot summit of Mt. Wilhelm, a fascinating highlands sing-sing, a trip on the Sepik River, and camping in two potential National Parks will be included in this trip, which will be escorted by Bishop Museum and New Guinea scientists. Travel... by landcruiser, boat, plane, and foot. Lodging... in hostels, research stations, camping. There will be lots of hiking (some optional). Ages 15 and up, \$700 plus air fare.

● **338—FINLAND CYCLING**
June/July. Leader, Marvin Stevens, 2447 Turk, San Francisco, CA 94118.

The Sierra Club will take to the "Road of the Frozen Ocean," an unprecedented bike journey. A truck will carry all dunnage and supplies for the three weeks it will take us to reach the Arctic Ocean. This extraordinary outing is proposed for hikers and campers who are enthusiastic about bicycling. It is foremost an outdoor encounter in the spirit of the Sierra Club's 1971 Yucatan cycling tour.

● **342—CORDILLERA BLANCA, PERU**
July/August. Leader to be assisted by experienced Chilean. Contact Al Schmitz, see above.

The Cordillera Blanca lies 300 miles north of Lima and is the highest tropical mountain range in the world and the most exotically beautiful glacier wilderness in the Americas. Access is easy and short, and the weather is dry, atmosphere brilliant. A circular trek of 22 days will reach at times above 15,000 feet. Daily hikes will seldom exceed 10 miles with the loads being carried by burros or porters. Acclimatization time is planned.

● **FOUR TRIPS TO RURAL JAPAN**
(352) July 13-Aug. 10, (353) July 13-Aug. 24;
(360) Sept. 14-Oct. 12, (361) Sept. 14-Oct. 26.
Contact Tony Look, 411 Los Ninos Way, Los Altos, CA 94022.

After one day in Tokyo, we will leisurely travel through rural Japan for periods of four or six weeks, visiting friendly people, picturesque gardens, inspiring mountains and quaint inns. The wilderness of northern Honshu, the Inland Sea, the rocky Pacific Coast are all along our route. Day hikes and short overnights into the mountains will be offered. Cost will be about \$1100 for four weeks, \$1500 for six weeks, plus air fare.

● **345—SWEDEN AND LAPLAND**
July 25-August 14. Leader, Ross Miles, 1047 Lassen Drive, Belmont, CA 94002.

After 8 days of canoeing through the beautiful scenery of Sweden's southern lake country we will travel by train above the Arctic Circle to Kiruna where an 8-day hike along the Kungsleden will take us into what is called Europe's last wilderness area. We will stay in mountain huts and lodges and carry only our personal belongings. This hike will end at Abisko Tourist Station, whence we will return to Stockholm. Cost will be about \$530, plus air fare.

● **354—KASHMIR HIMALAYA**
August. Leader, Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611.

A circular trek of about 160 miles will take us leisurely through some wild and rugged country, although the eastern Himalaya is not on the grand scale of Nepal. Its mountains are more intimate, its valleys greener and flower-strewn, and its imposing peaks alternate with deodar forests and high lovely meadows. Ponies will carry camp gear and food, and several layovers are planned. Several days will also be spent in the Vale of Kashmir. The trip will last 30 days.

Write for the specific Trip Supplement. Trip prices and further information on the 1974 Foreign Trips will be sent to you as soon as it becomes available. It will be several months before supplements on all the trips are ready. A \$100 deposit per person is needed to reserve space. See additional reservation information on following pages.

● **358—LA BELLE FRANCE**
August/September. Ivan de Tarnowsky and Lewis Clark, 1080 Eddy, #602, S.F., CA 94109.

Hike the Alps SE of Grenoble. See the Frenchman at work and play; La Transhumance, seasonal sheep migration; La Renaissance de l'agriculture, France is now the breadbasket of the Common Market; L'Histoire Locale, bearing imprints of the Romans; L'Ecologie, interpreting a Nature Reserve; La Vie des Habitants, seeing how they protect natural resources, and sampling la bonne cuisine; Alpinisme, spectacular mountains and an optional climb of Mt. Viso. Trail elevations 5300-9300 feet.

● **THREE FALL TREKS IN NEPAL**
(363) JUMLA, September/October, and (372) EVEREST, October/November. Contact Doug McClellan, 88 Ridge Rd., Fairfax, CA 94930;
(369) MANASLU, October. Contact Peter Rona, c/o NOAA, 15 Rickenbacker Causeway, Miami, FL 33149.

After the monsoon Nepal once again becomes attractive to hiking and camping parties. Next year we will offer three widely varying trips to this enchanting region. Trip 363 will enter the seldom visited Karnali zone of western Nepal for a moderate trek that will reach within 18 miles of Tibet. Trip 372 will follow the classic Everest expedition route, covering a full 500 miles in fifty days, and from Darjeeling will attempt to reach Gangtok, the capital of Sikkim. Trip 369 will cover 250

miles in about 30 days, and offers a fine overall impression of Nepal. Write leaders for full information.

● **375—ANGEL FALLS, VENEZUELA**
November/December. Leader, Ted Snyder, P.O. Box 232, Greenville, S.C. 29602.

Indian paddlers will take us 7 days by canoe into one of the world's most remote places to see the highest known waterfall, 3382 feet. Our guide, Jungle Rudi Truffino, himself lives at a lonely outpost which we can reach only by charter plane. The country, south of the Orinoco, is very beautiful and almost totally without people. We will also visit Kaieteur Falls, deep in the jungles of Guayana, more spectacular though not nearly so high. Hiking moderate, birding and sightseeing sensational.

● **378—CENTRAL SAHARA TRIP**
December. Contact Al Schmitz, 2901 Holyrood Dr., Oakland, CA 94611. (Ass't, J. L. Bernezat.)

By camel, landrover, and foot, deep we go into the great expanses of the fabled Sahara where live the Touaregs, Herratin, and the Chaamba. With the Touaregs we will explore the strangely eroded mountains and mysterious canyons, and see the ancient art forms of a people long vanished. Camping will be simple, travel not demanding, and the trip will last about three weeks. Our base point will be Algiers.

● **380—GUATEMALA BICYCLING**
December 13-January 5. Leader, Linda Liscom, 80 Harrison #4, Sausalito, CA 94965.

This will be a moderately strenuous trip exploring the highlands and lowlands by both bicycle and foot. There will be several volcano climbs and visits to the Mayan archeological sites at Tikal, Quirigua, and La Democracia. Christmas celebration at the Fiesta of St. Thomas in Chichicastenango is the highlight of the entire trip.

UNDERWATER EXPLORATIONS

APRIL 6-14 (319) • COZUMEL and YUCATAN • SCUBA DIVING

Dive the warm, clear, and prolific waters of Yucatan using a 76-foot boat as a base. Visits to Merida and the isolated Mayan ruins of Tulum. For certified divers. Leader, Brad Truax.

JUNE 10-20 (337) • SEA OF CORTEZ • SNORKEL & SCUBA

A family camping and skin diving trip along the gulf's east coast. The area is beginning to develop but still offers isolation. No experience required. Scuba for certified divers. Leader, Tom Maxson.

JUNE 17-JULY 14 (340) • GALAPAGOS ISLANDS • SCUBA DIVING

The Galapagos experience with a new dimension promises sea lions, tropical fish, and endemic species like the marine iguana. For certified divers with ocean experience. Leader, Kent Schellenger.

JUNE 24-JULY 4 (341) • GRAND CAYMAN • TROPICAL REEF ECOLOGY

This on-site course (for optional credit) is taught by marine biologists. Daily lectures and directed diving in warm clear water on prolific Caribbean reefs. For certified divers. Leader, Steve Webster.

JULY 22-AUGUST 1 (344) • TURKS & CAICOS • LEARN TO DIVE

Newly discovered by divers, these unspoiled Caribbean islands offer warm, clear, and beautiful diving for novice and experienced snorkelers and divers. A basic scuba course is provided. Leader, Kent Schellenger.

AUGUST 19-SEPTEMBER 2 (356) • SAMOA • SNORKEL & SCUBA

Western Samoa is a nearly untouched area of the Pacific, and the center of Polynesian culture. We will explore the islands and travel by outrigger to snorkel tropical reefs. No experience required. Some scuba possible for certified divers. Leader, Steve Webster.

DECEMBER 22-JANUARY 1 (382) • VIRGIN ISLANDS • SNORKEL & SCUBA

A family will provide a different Christmas, snorkeling and diving in the warm, colorful Caribbean. No experience required.

For details, write to:

KENT SCHELLENGER, 20800 Homestead Road, Apt. 5-F, Cupertino, Ca 95014



*Pioneer
Basin
Outpost
Camp,
by Philip Hyde*

YOU CAN STILL GO ON A WILDERNESS OUTING!

Although at press time more than 82 percent of all places on Sierra Club Wilderness Outings are taken, and many trips are completely filled, some room is left. Each of the trips listed below has several vacancies and with prompt action you can still have the experience of going on a Sierra Club trip this summer. More than 4000 members did this last year, and as a result look upon the wilderness with a keener understanding.

Trip Number	Dates	Total Cost	Res. Deposit	Leader	
HIGH TRIPS					
28	Mid-Sierra South: Florence Lake/Cedar Grove	July 21-Aug. 4	300	50	Don Parachini
29	Mid-Sierra North: Cedar Grove/Florence Lake	July 21-Aug. 4	300	50	Hugh Kimball
HIGH LIGHT TRIPS					
30	Big Arroyo-Mineral King, Sierra	Aug. 2-16	280	50	Roger Smith
35	Olympic National Park, Washington	Aug. 19-30	235	50	Al Combs
36	North Cascades, Young Adult, Washington	Aug. 19-30	185	35	Joyce Biethan
37	Sawtooth Mountains, Idaho	Aug. 19-31	275	50	George Hall
40	Fish Creek, Sierra	Sept. 1-8	165	35	Jack Gunn
41	Silliman Crest, Sierra	Sept. 8-15	160	35	Larry Germain
42	Kolob Canyons, Zion National Park, Utah	Sept. 8-15	170	35	Allen Malmquist
43	Needle Mountains, San Juans, Colorado	Sept. 11-21	260	50	George Hall
44	Navajo Rims Trail, Modified Knapsack, Arizona	Sept. 16-27	290	50	Jack Goodman
45	Capitol Reef, Utah	Sept. 23-Oct. 5	250	50	Ray Des Camp
46	Pinacate Peak, Mexico	Dec. 27-Jan. 1	125	35	John Ricker
FAMILY CANOE TRIPS					
94	Klamath River Teen Trip, N. California	Aug. 5-11	***	50	Barbara & Bill Bair
***Total cost \$320 for two parents and one child; \$80 each additional child.					
BASE CAMP TRIPS					
50	Long Lake, Inyo National Forest, Sierra	July 1-13	165	35	Ray Des Camp
51	Graveyard Lakes, Sierra National Forest	July 8-20	175	35	Ray Des Camp
52	Long Lake, Inyo National Forest, Sierra	July 15-27	165	35	Sy Ossofsky
54	Graveyard Lakes, Sierra National Forest	July 22-Aug. 3	175	35	Salem Rice
55	Rangeley Lakes, Maine	July 29-Aug. 4	90	25	Will Squire
57	Hilton Lakes, Inyo National Forest, Sierra	July 29-Aug. 10	165	35	Ray Des Camp
58	Back-Country Camp, Merced Basin, Yosemite	Aug. 4-18	210	50	Allen Van Norman
60	Second Recess Alpine Camp, Sierra	Aug. 5-17	175	35	Richard May
62	Hilton Lakes, Inyo National Forest, Sierra	Aug. 12-24	165	35	Arthur Elliott
63	Second Recess Alpine Camp, Sierra	Aug. 19-31	175	35	Richard May
64	Lincoln-Scapegoat Wilderness, Montana	Aug. 19-31	190	35	Jay Holliday
65	Death Valley Christmas Camp, California	Dec. 22-31	130	35	Ray Des Camp

RIVER RAFT TRIPS

150	Yampa-Green Rivers, Colorado-Utah	June 19-23	**	50	Edward Rosenstiel
160	Rogue River, Oregon	Aug. 13-17	215	50	Bill Huntley
164	Hells Canyon of Snake River, Idaho	Aug. 26-31	260	50	Hermann Horn
165	Grand Canyon Oar Trip, Arizona	Sept. 10-21	435	50*	Victor Monke
166	Uintah-Green River, Utah	Oct. 1-6	240	50	George Roush

*Per person deposit.

**\$98 for children under 12; \$130 for persons 12 and over.

CANOE-KAYAK TRIPS

179	Canadian San Juan Islands, British Columbia	June 18-25	125	35	Tris Coffin
181	Fulton Chain of Lakes, New York	July 8-14	80	25	Lyle Seeger
182	Boundary Waters, Minnesota	July 17-26	160	35	John Wheeler
186	Yellowstone Lake, Wyoming	Aug. 27-Sept. 2	145	35	Paul Hewett
187	Rio Grande Canyons, Texas	Oct. 14-20	80	25	John Baker

KNAPSACK TRIPS

199	Picket Guard Peak, Sequoia, Sierra	July 4-15	95	25	Bud Siemens
202	Long Trail, Vermont	July 8-14	80	25	Richard Williams
203B	Flat Tops Wilderness, Colorado	July 14-21	70	25	Larry Gaudreau
205	Goddard Divide, Kings Canyon, Sierra	July 14-22	75	25	Jim Skillin
212	Riddle Peaks-Blue Mountain, N. Cascades, Wash.	Aug. 5-17	110	35	Dave Corkran
219	Presidentials, New Hampshire	Aug. 19-25	90	25	Lynn Brown
226	Mineral King-Sequoia, Sierra	Aug. 26-Sept. 7	100	25	Bill Colvig
229	Boundary Peak, California-Nevada	Sept. 9-16	65	25	Wes Bunnelle
232	Nankoweap-Salt Trail, Grand Canyon, Arizona	Oct. 21-27	80	25	Don McIver
234	Grand Canyon Christmas Trip, Arizona	Dec. 27-Jan. 1	80	25	Lester Olin
235	Christmas Trip, Arizona	Dec. 27-Jan. 1	80	25	Chuck Kroger

SIERRA BURRO TRIPS

264	Wolverton to Mineral King 2-Week Trip	July 25-Aug. 8	180	35	Ted Bradfield
268	Mineral King to Wolverton, 10-Day Trip	Aug. 29-Sept. 8	120	35	Ron Gilmer

ALASKAN TRIPS

279	Brooks Range-Romanzof Mountaineering Trip	Aug. 5-25	355	50	Gus Benner
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UNDERWATER EXPLORATION

286	Grand Cayman: Learn to Dive, Snorkel & Scuba	July 1-12	505**	100*	Kent Schellenger
287	Pacific Coast, Baja California: Scuba by Boat	July 29-Aug. 3	270	100*	Kent Schellenger
290	Grand Cayman: Tropical Reef Ecology for Scuba	Sept. 6-16	525	100*	Steve Webster

*Per person deposit.

**\$5 per day additional fee for scuba divers.

FOREIGN TRIPS*

437	American and Western Samoa	Sept. 3-15	475	100	Wheaton Smith
457	East Africa, Kenya and Tanzania	Sept. 22-Oct. 21	1285	100	Walt Weyman
460	Nepal, Kali Gandaki Trek	Sept. 29-Nov. 3	1125	100	John Edginton
310	Puerto Vallarta Boat Trip, Mexico	Nov. 5-17	315	100	Ellis Rother
462	Nepal, Mount Everest Base Camp Trek	Nov. 30-Dec. 31	1050	100	Doug McClellan

*Per person deposit; total cost does not include air fare.

SERVICE TRIPS

Almost all service trips have vacancies. Contact leaders listed in the January 1972 Outing Issue of the Sierra Club Bulletin, p. 32-35.

HOW TO APPLY FOR A SIERRA CLUB TRIP

Before sending in your reservation application and deposit, please read the section in the January Outing Bulletin about reservation deposits and refund policies which apply to domestic and foreign outings.

If you are a new member, or do not have this issue, write to the Outing Department for a copy.

In order to process your application the following information is **necessary**: the trip name and number, your name and the names and ages of additional family members to be included on your application, your address and telephone number and your membership number.

Send your application and deposit directly to:

Sierra Club Outing Dept.
P.O. Box 7959
Rincon Annex, S.F. 94120

Please do not enclose with dues or book orders.



Above Coppermine Pass, by Bob Koch

