SIERRA CLUB BULLETIN

September 1962

Where would we escape the epidemic of urbanization . . .
Where would we find the solitude of an unspoiled beach,
the renewal of mind and spirit that comes from contact
with the natural forms and rhythms of the earth?

—Harold Gilliam
from *Island In Time*

"Ho Hum — It's Sure Dull Around Here"

Courtesy Herbert Block, the *Washington Post*

UNEASY CHAIR

How Many Minutes for Wilderness?

The NLMA issues *The Lumber Letter* regularly and, as might be expected of the lumber manufacturers' national association, no noticeable support has been evident for the Wilderness Bill conservationists conceived of and nurtured for these five years. The House Subcommittee on Public Lands ordered an amended Wilderness Bill reported to the full House Interior Committee last week.

We can fairly well describe what the committee did to the bill by quoting *The Lumber Letter*:

"If passed by the House in its present form, this drastically revised bill will probably meet with strong opposition from proponents of the original Wilderness Bill.

"Sources close to the scene of action indicate that Senator Clinton Anderson (D.-N.M.) will appoint Senate conferees to fight hard for the provisions contained in his own bill, while the Interior and Agriculture Departments probably will recommend a Presidential veto, should the bill pass with a majority of House provisions (especially land withdrawal restrictions) intact.

"NLMA has requested industry members urge their Congressmen to (1) support the Subcommittee's amended bill and (2) stand firm against adoption of the harmful provisions of Senate-passed S-174."

The chairman of the full committee, Wayne Aspinall of Colorado, promised in a radio interview with Jeffery Cohelan of California several months ago, that the full committee would report the bill out in June. He has the power to block it or to neglect to press for action on it by the Rules Committee, but we have never known him to go back on a promise. Conservationists therefore hope that the full committee, though it act late, will make amends by making the Wilderness Bill recognizable again.

As it now stands amended by subcommittee, the bill has two parts: Title 1 would in effect rescind the Executive Branch power that has established most of our national monuments (nine of which became national parks after Congress had had time to debate each carefully) as well as our most magnificent wildlife range. Considering the time it too often takes the Congress to act (committees never did act as swiftly as individuals, and Congress is a fairly large committee), conservationists can take for granted that enactment of Title 1 would close the door on any further scenic-resource conservation in the United States. It would be the final capitulation to materialism.

Title 2 contains what is left of the Wilderness Bill idea. It in effect strikes out everything after the enacting clause of the Saylor Bill, professes an interest in wilderness, allows mining to continue until 1972, eliminates parks and wildlife refuges from the wilderness system, includes the six million acres of national forest lands that have been reclassified formally as wild or wilderness areas, and leaves to the tender concern of groups and agencies primarily concerned with utilization and hardly tolerant of preservation everything else that conservationists had hoped might be in a Wilderness System.

The NLMA, which would not have lost access to lumber were the original Wilderness Bill to pass, does not hesitate to urge legislative action upon its members. Neither does the American Mining Congress, or the National Reclamation Association, or the stockmen, or the Chamber of Commerce of the United States. They have handsome headquarters very handy to the Hill in Washington.

Meanwhile, back at 251 Kearny Street in San Francisco, Trustees for Conservation, which has fielded the only legislative representative working primarily on the Wilderness Bill, is down to its last few dollars. The Sierra Club Foundation, conceived of by club leaders as a new organization to receive tax-deductible gifts and bequests to help Sierra Club scientific, educational, and literary endeavors but not for legislative effort, has received its favorable tax ruling from the Treasury Department.

Five floors below, the seventy-year-old Sierra Club can merely remind you of your constitutional right to make your views known. People like you already expressed yourselves, across this wide land, clearly enough to get a good Wilderness Bill through the United States Senate by a handsome margin.

That was half the battle, and if the other half isn't won in the next few weeks, conservationists can start all over again. Years of effort and square miles of wilderness can be saved if enough conservationists will invest a few minutes promptly. —D.B.

Sierra Club Bulletin

SEPTEMBER, 1962
VOL. 47 — NO. 6

. . . TO EXPLORE, ENJOY, AND PROTECT THE NATION'S SCENIC RESOURCES . . .

*THE SIERRA CLUB,** founded in 1892, has devoted itself to the study and protection of national scenic resources, particularly those of mountain regions. Participation is invited in the program to enjoy and preserve wilderness, wildlife, forests, and streams.

Published monthly except April, July and August by Sierra Club, 2061 Center Street, Berkeley 4, California. Annual dues are $9 (first year $14), of which $1 (non-members $3) is for subscription to the *Bulletin*. Second-class postage paid at Berkeley, California.

Cover: Bear Valley and lupine, proposed Point Reyes National Seashore. From *Island in Time: The Point Reyes Peninsula,* by Harold Gilliam, photographs by Philip Hyde.

JULY IN SEATTLE

The Park Idea Around the World

THE PROCEEDINGS of the First World Conference on National Parks will come later and should be looked at carefully. Brief impressions can serve for now—impressions of one of the most important meetings ever held in behalf of what the club stands for.

Much of this meeting was engineered in Mills Tower—but five floors higher up than the Sierra Club is by George L. Collins, of Conservation Associates, who was Secretary-General. Doris Leonard and Fred M. Packard were Deputy Secretaries General, West and East, respectively. Sponsorship was most auspicious—the International Union for Conservation, the Natural Resources Council of America, and many of the organizations Dr. Harold Coolidge is in constant touch with as he wings his way about the world for the National Research Council.

It all came together at the beginning of July in Seattle. I saw just a half day of it as discussion leader for a session on an old dilemma —preservation *versus* use. The session chairman was from England. The three panel members came from Australia, South Africa, and Washington, D.C. Behind us were vice-chairmen of the session—from Nigeria, the Philippines, Uganda, and several other nations of the seventy countries represented in Seattle.

The opening statements were first rate. Resolving firmly to lead *discussion* and not to talk, I wrote and edited a few sentences to make what I could of a few words, and spoke slowly so that the simultaneous translation could make the points I was trying for. Then it was time for people to speak up from the floor—a floor upon which, as far as I could see, all mankind was represented (except the U.S.S.R., which had declined to be represented).

Many people wanted to speak and I tried to recognize a fair sample in the time allotted. What happened sent a quiet thrill through me. Occasionally the comments were in English, but more often they were not. Tiny transistor radios lay in front of every person, and you could dial French, Spanish, or English—whichever was nearest your home language. The gentleman from Madagascar spoke French mine was not up to, so I tuned into the English translation being supplied instantly from a booth above us. When the gentleman from the Philippines spoke, I reached again, more quickly. Whatever the language, whatever the color of the speaker, we could understand—and understand more than the language. The *idea* was understood, the national-park idea, around the world. It was America's idea, and now the world knew it—better than some of us do!

Outside, the Space Needle was as tall as ever and Century 21 was doing a wonderful business—or so we were told. The newspapers covered the external event, but we were absorbed inside. What was accomplished would not show in the headlines, but it would show on the land, on countryside in many nations, where an idea was gaining stature and being acted upon: man's purpose on earth is to have reverence for wildness, not just to change the earth merely because he is able to change it.

The session had to be ended promptly and it was. There was a recess, after which Secretary Udall arrived to represent the President. While he was being introduced I showed him my copy of his speech—already mimeographed *in French*. He was so impressed with the efficiency of the conference management that he took it with him—but read his English version. It is always pleasant to hear a Secretary of the Interior make a first-rate conservation speech, as the thousand people who attended our 1961 Wilderness Conference know and the other thousands who have bought the book his speech appears in. But it is even better, while he is speaking, to see a British session chairman turn to a vice-chairman from Uganda behind him, smile, and make a gesture which as much as says, "Isn't that about as well as you've ever heard that idea expressed, and aren't you glad he said it?" (gestures can say all this and more, you know) and to have the man from Uganda flash some very white teeth and, again with a gesture, fully agree. —D.B.

From Secretary Udall's July 4 Address:

I would like to think that this conference strikes a wholesome note of sanity in a troubled world. It is a sign that men are questioning the false gods of materialism, and are coming to realize that the natural world lies at the very center of an environment that is both life-giving and life-promoting. There is hope in this meeting, or so it seems to me, that the values of the spirit are reasserting their primacy. . . .

Each generation must act anew to revise its conservation ethic, and to establish new plans for the wise use of its resources. . . .

So great is the power of men and nations to enlarge the machine-dominated portion of the world that it is not an exaggeration to say that few opportunities for conservation projects of grand scope will remain by the year 2000. Let me put the case even stronger: with few exceptions the places of superior scenic beauty, the unspoiled landscapes, the spacious refuges for wildlife, the nature parks and nature reserves of significant size and grandeur that our generation saves will be all that is preserved. . . .

During the 40 years separating us from the 21st Century, the demand for wilderness and seashore parks will be an estimated ten times greater than it is today. But as the need increases, land and forest and water are being preëmpted for other uses.

However, technology is not the only threat—the only challenge—that confronts us. It is the uncontrolled growth of population that will surely and finally alter the man-land relationships on all of our continents unless our statecraft takes cognizance of this problem . . . the world population will double every thirty-five years—and double again every thirty-five thereafter—unless something intervenes to break their projections. . . .

We must inform the world that if this occurs, congestion—with all the unlovely overtones of that too-familiar word—will be the be-all and the end-all of our lives, our nature reserves will be steadily sacrificed to the demands of progress—and park and wilderness experiences will be rationed out among the fortunate few.

At the recent White House Conference on Conservation . . . Dr. Walter W. Heller, chairman of the President's Council of Economic Advisors, asked: "What good is an increased gross national product if we in the process of producing it chew up, destroy, desecrate so many of the values, so many of the enjoyments which really add up to the improvements in human well-being and in the quality of life that we seek?"

. . . We know also that our wildlands form the only perfect wildlife habitat, and constitute an irreplaceable science laboratory where we can measure the world in its natural balance against the world in its man-made imbalance.

. . . Whatever differences of ethnology, geography, and traditions are represented here, we are bound together by the universal challenge to honor, dedicate, and maintain significant natural areas around the globe.

THE WOODS

by McLEOD VOLZ and MARY MOSTELLER

adapted from a story set in Muir Woods

. . . from a forthcoming book

Play in a pool of warm light

Run through the dark woods
where the trees are wide with caves big enough to hide in
and so high the sun can hardly find its way down . . .

The log is a whale,
a rhinocerous
warm and round and smooth

Salmon come up to spawn after the big rains,
Dark giants of the stream.

Then the pool becomes a looking glass.
Behind it the crawdads crawl
Tiny trout swim through its sky.
A pebble falls deep.

A creek is to walk along,
among the smooth rocks and ferns
and the jointed stalks of the ancient horsetails
where frogs hide, and bugs so small
that a little leaf is a whole house
and a tree a whole world.

The woods are so big and quiet

sometimes it is good
to just sit and look, and
to listen to the way the world sounds.

CLASSROOM CONSERVATION

Fern in Rain, Mount Rainier National Park, by Ansel Adams
from This Is the American Earth

". . . human rights include the right to put one's face in clear, pure water, to discover the wonders of sphagnum moss, and to hear the song of the whippoorwills at dawn in a forest where the wilderness bowl is unbroken."

—Justice William O. Douglas, in
Wilderness: America's Living Heritage

Whom Do You Live Next Door to?

A friend of ours said last night, "I got my conservation start from my neighbor." It was a good start. "And most of the background," he went on, "I got in high school, not college."

We wondered how much exposure high school students receive today to the important question of natural environment—one of the most vital subjects of all, no matter how much pavement fills our days. As Aldous Huxley has said, "Culture is the intensification of consciousness." So you would expect a teacher to be in the business of intensifying, and a biology teacher, of all things, to intensify a certain consciousness of the life force, of evolving form and function.

It was rather disheartening to learn, therefore, of one high school biology teacher who didn't cover this subject at all and apparently didn't know how to. Some students questioned the omission, whereupon the teacher asked one of them, "Bill, will you explain evolution to the class?"

We don't think much conservation background emerged from that biology class—this in the face of the rapidly increasing evidence all around us that biological illiteracy is a luxury civilization can no longer afford. There will be no living creature that knows less about its environment than civilized man unless some changes are made.

How is the situation in your neighborhood? Are the teachers looking for material? What are they finding?

The *CTA* (California Teachers Association) *Journal* published a relevant article last December which ought to be seen by some neighbors as well as by teachers outside California. The article, changed slightly, follows:

RECENTLY I was asked to look over a manuscript for a book on forests which was to be sold to schools. I took about two minutes to see it for what it was—the forest industry's conception of a forest and how it should be cut. It was an out-and-out special-interest message, and it was no surprise to learn that lead work in its preparation had been done by a public-relations man for the forest products people.

The twelve pages of comment I appended to the manuscript must have horrified the publisher, but he took it in good spirits and promised to try to incorporate some of it. He even asked if I would like to do a children's book on forests!

Is it a children's book on forests that is needed, or on a more general conservation subject? Is the market—the teacher's library at home and in the classroom—sated with "wise-use" conservation and devoid of the voice of ecological conscience—the small thin voice stressing that we have other obligations than to use up our resources and turn our environment upside down?

In short, is all the emphasis on the *use* side of conservation, and not on the side of saving? Are we still where we were more than a century ago, when the Conservation movement got its name?

At the White House Conference of Governors called by President Theodore Roosevelt in 1908, Conservation became a political force. What inspired the Conference is beside the point—except that T.R.'s short camping trip in Yosemite with John Muir may have had some influence. Muir was then in his 11th year as president of the Sierra Club, which he had founded in 1892 to enlist public support in protecting the forests and other scenic features of the Sierra Nevada and mountain regions of the West.

The Governors' Conference was a milestone in conservation, but it was almost silent about preservation. T.R. himself had some pertinent remarks about saving beautiful places, but among the other conferees there was only one, J. Horace McFarland, who dwelt on the subject. He and Muir had a mutual friend, Robert Underwood Johnson, at the old *Century Magazine*, and it was probably Johnson who wrote in an editorial two years later:

"The official leaders of the conservation movement . . . have never shown a cordial, much less an aggressive, interest in safeguarding our great scenery.

"The fact is," he went on, "there is no more popular and effective trumpet call for the conservation movement than the appeal to the love of beautiful natural scenery. In this matter the idealists are more practical than the materialists."

Johnson spoke briefly of the economic value of great natural scenery and then related beauty to status: "The first thing that a man does after he obtains a competence is to invest his money in some form of beauty . . . He settles in some town, suburb, or other region mainly because it is beautiful, and he is all the happier if his home can command an attractive natural view."

"What is needed," he concluded, "is the inculcation, by every agency, of *beauty as a principle*, that life may be made happier and more elevating for all the generations who shall follow us, and who will love their country more devotedly the more lovable it is made."

This was part of the lament that there had been so much ado at the Governors' Conference about the practical utilization of commercial resources, and so little about beauty.

The lament could well be much louder now, for since the Governors' Conference we have used up, scattered, or otherwise lost to the future more natural resources than all previous history. Two devastating world wars contributed notably to this loss, but their total cost is but a small part of the Gross National Product for the

Or, How to Look a Gift Course in the Mouth

past half century—probably less than ten per cent and nearer five. Much of the rest of the loss is chargeable to peacetime convenience and the enforced waste to today's planned obsolescence.

This sort of thing cannot go on, although many of our practices indicate that we think it must. As the eminent publisher of *Scientific American,* Gerard Piel, says:

"The peril that threatens the last of the American wilderness arises . . . from the same historic forces of rapacity and cruelty that laid waste the land in the Mediterranean basin, Arabia, India, and the treeless uplands of China.

"The wilderness is there, however, to recall the [American] dream. And lately we have won a reprieve through the advance of scientific understanding . . . The frontier of understanding has no limits, and the curse of want and poverty may yet be lifted from the life of our species. That frontier cannot be exploited on the same selfish terms as the frontier that lies behind."

My thesis here is that the conservation visual aids made available to today's teachers are carbon copies of the old plans for exploitation that have led us into serious trouble and will lead us into worse. A teacher needs sharp vision these days to penetrate the gloss.

Consider the current controversy over wilderness and relate it to the kind of material teachers have available—if what my children (8, 11, 15, and 16 years) bring home is any criterion.

The march of civilization had encompassed about 95 per cent of original, primeval America. Five per cent is about all that has not been substantially altered by man's technology. The current Wilderness Bill proposal would improve the protection of two-fifths of that five per cent. But practically every resource-exploiting industry seems dead set against the efforts to save even this two per cent. Conservationists counter that these groups are thinking too much of their own present and too little of everyone's future—that all the commercial resources being fought over in wilderness can come from alternate sources, and sometimes more cheaply.

I put it this way at a Congressional hearing in Sacramento:

"If our technology is so poor that we cannot survive on the 95 per cent of our land that we have already put to economic use, then we had better turn in our suits. The last five per cent won't save us.

"Let us ask how little wilderness the wilderness exploiters want America to have. Into how small an unspoiled area would they crowd all the people, in our surely more populous future, who want to see some of the world as God made it? Into how small a zoo would they jam the endangered species of wilderness wildlife—'our only companions in what would otherwise be a lonely voyage among dead atoms and dying stars'? How many acres would they leave for the evolutionary force, for the organic diversity that is essential to the very chain of life, vital to our survival? Into what small lookalike cages would they put man himself?

The wilderness opponents, to a man, had a pet catch phrase—"Multiple Use." A brilliant political scientist who has analyzed this concept concludes that it is "government by cliché." An eminent geographer calls it "a bureaucratic attempt to mean all things to all people." It is beyond doubt a shibboleth, meaning that it is a catch phrase distinguishing friend from enemy. The people who love it are in the business of buying or selling public resources. The people who disdain it, who would rather talk of highest use, balanced use, or even of *non*use of certain places, are in the preservation camp. They would like to see wilderness really saved. They would like to see more national parks set aside and kept as great places, not debauched to mediocre playgrounds.

My own bias is, I hope, showing clearly. It is widely shared, but its advocacy is notoriously underfinanced. Who makes money in the saving of a piece of beautiful land? Who makes it directly enough that he thinks it worth while contributing money—and teachers' training aids—to the saving of more?

On the other hand, you may wish to scrutinize who makes money by persuading the public to let its guard down. What timber company finds it well worth the investment to have its public-relations men write text-books on forests, or to distribute free a series of color and sound films on the glories of logging and tree farms? Have they been so successful that you do not even question the term "tree farm"?

Is any film available pointing out that an overmature tree and dead tree—even "worthless species" and beetles—are part of the natural scheme of things?

Do any of the leaflets or films depict grazing on mountainous public lands as an unmixed, multiple-use blessing, with no mention of how much soil has been lost because stockmen insisted on running too many hooves over the land years ago—and still do it today? There is probably evidence of this within an hour's drive of any classroom in California. Is there a film available to you showing that this is the way not only soils go down the drain, but also civilizations?

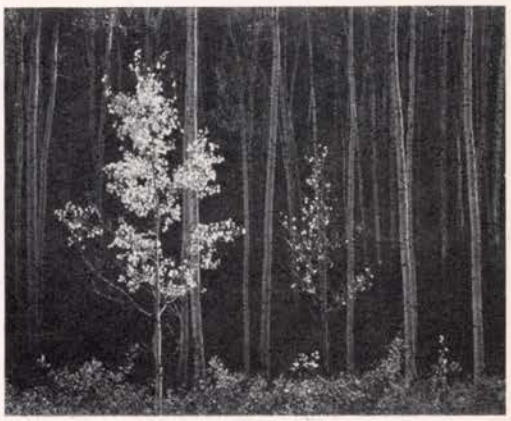
In social-studies materials, do freeways come out as marvels of present-day engineering, possibly because never before was there so grand an alliance in the spending of public funds? Or is there a suggestion that they are ominous threats to agricultural lands, to the hearts of cities, and to the lungs of children exposed to the steadily increasing smog caused by our sudden and debilitating love for the reciprocating engine and pavement? Is there anything available to help explain to your class that an alternate solution—mass transportation—will move people instead of vehicles and will leave room for more parks? Anything, also, to explain the value of a scenic road as opposed to a high-standard highway that destroys beauty to create speed?

I hope my bias is still showing. I hope you share it—and realize how much special interest there is in the opposite view that probably prevails in all the "free" materials generously offered the teacher.

"God bless America: Let's save some of it"—this was the title of a little piece one of our members, Weldon Heald, wrote many years ago. That's what the Sierra Club is trying to do.

Many of Sierra Club's membership of 20,000 are teachers who like to explore, enjoy, and protect national scenic resources when they find spare time. They welcome the shoulders of others at their wheel—and the cost of putting a shoulder there is nominal. The members should be paid for all they do, but they work it the other way—they pay a little for the chance to work together.

We have several films, two in particular, that work reasonably well on behalf of the attitude I have been trying to express here. One is "Nature Next Door," by Professor Robert C. Stebbins, a professor of zoölogy at the University of California, Berkeley, chairman, 1960–61, of their elementary school science committee. This film appeals to a surprisingly wide range of ages.



Aspens, New Mexico, by Ansel Adams
from This Is the American Earth

"Fire and disease are still considered to be unmitigated forces of destruction. Yet, without them, there would be no aspens, glory of many a western mountain."

The other is "Wilderness Alps of Stehekin," of which Louis E. Means, of California Outdoor Education Workshops, said: "This film depicts the beauties of nature in the mountain-lake country of the West with a terrific impact. It has a quality unmatched; an appeal to young and old alike; a stimulation to things badly needed in modern living. Conservation gets a tremendous assist, plus a human quality which leaves an indelible impression."

We are trying to prepare interpretive booklets on each film and we hope to sell still more copies to individual schools and school districts—all on our habitual nonprofit basis.

We have books, too. Three need most emphasis. The first two: *The Meaning of Wilderness to Science* and *Wilderness: America's Living Heritage,* are based on wilderness conferences and full of extremely valuable material for teachers interested at all in the natural world and its interpretation and meaning.

The third book, the Sierra Club's greatest publishing achievement, is *This Is the American Earth.* It received the American Library Association and American Institute of Graphic Arts awards and a very special kind of tribute from San Francisco writer Hal Gilliam, who told the Wilderness Conference audience last April: "I can't think of any greater single effort for conservation which will do more in the long run for conservation education than what would happen if everybody in this room were to decide to spend a few dollars to buy a book called *This Is the American Earth* and to mail it around to a long list of our friends, encouraging each of them to read it for a couple of weeks or a month and then send it on to the next person on the list. And I can think of no better gospel than a book such as *This Is the American Earth,* by Ansel Adams and Nancy Newhall."

I hope all this has not sounded too much like a sustained commercial. If it has, remember that no one profits from it except the young people you teach, those who may in the future enjoy the wilderness we saved.

—DAVID BROWER

Response

Missing the point—that school children should not be confronted with an out-and-out special-interest message without at the same time having some basis for evaluation of it—a lumber manufacturers' representative wrote in to the *CTA Journal* to argue that an industry-written text was perfectly all right.

Editor of *CTA Journal* appended the following alarming note:

"Although supporters of the Brower point of view outnumbered 'cool' letter-writers, the mail from forest products publicists outweighed the former by several pounds. Several thick packets of excellent beautifully-printed booklets, charts, and other teaching aids lie on my desk. They came from: U.S. Dept. of Agriculture, Forest Service, 630 Sansome St., San Francisco 11; American Forest Products Industries, Inc., 1816 N St., N.W., Washington 6, D.C. (also from 398 Monadnock Bldg., San Francisco 5); and California Redwood Association, 576 Sacramento St., San Francisco 11. Teachers may have similar packets, simply by asking for them. AFPI proudly points to the 3,330 requests received from California teachers in 1961—and 68,553 printed items were sent to them free."

Two months later the editor summed up this way, alas:

"Conservationists . . . tend to press for prohibitive fences around primitive areas. They say the forests and streams, glacial moraines and wildlife sanctuaries should be isolated from human contact, left for future generations to enjoy. This was the [Brower] theme."

This is news to us, and we wonder if you agree. The editor then reported that a forester had written in to say what a fine thing multiple use was, and the editor then concluded, "If we consider the interests of all those who are interested in the woods and forests and mountains—economic, professional, recreational, or sentimental—we must accept the logic of Multiple Use."

We like David Pesonen's appraisal better: Multiple use doesn't solve the problem. It *is* the problem.—Ed.

The Enormous Stake at Rainbow Bridge

The fight to save the National Park System which was won publicly in Dinosaur National Monument is being lost privately at Rainbow Bridge.

The premature closing of the diversion tunnels at Glen Canyon dam is about to flout the law, disregard honor, and destroy a unique piece of dedicated national monument. As the thousands know who have so far seen the remarkable architecture and life forms of Glen Canyon's 186 miles of main canyon—countless hundreds more of side canyons—the premature closing of those tunnels will constitute man's worst crime against natural beauty—the needless sacrifice to mere kilowatts of one of the wonders of the world.

Citizens everywhere should alert themselves on this one, and arm themselves with facts and understanding. The long hard struggle for conservation—for democracy itself—will become meaningless if the laws which are the milestones along the way or themselves made meaningless by willful or careless action or by apathy and negligence.

The stake at Rainbow Bridge is enormous.

* * *

In the Public Works Appropriations Subcommittee last May a few conservationists were given five minutes each to argue for money for the protective works at Rainbow. We heard Congressman Wayne Aspinall say that if there were real structural threat to Rainbow, he would of course favor the protective structure. But merely having water in the canyon didn't to him seem to warrant the expenditure. Conservationists feel that the park principle is important regardless of structural damage to the Bridge.

For those who feel differently, an analysis of the geological threat is of major importance. Hence the letter (and enclosure) which follow. In writing of this I relied heavily on expert help. What I did, in large part, was to sit in on a series of sessions in Washington and edit and sign the work of many others. The letter was to the U. S. Geological Survey to elicit their honest geological answers and avoid channels which would give us politically flavored answers or a general watering down by the Bureau of Reclamation. The Bureau has been sadly careless about facts in several phases of the Colorado Project—most notably about evaporation and hydrology at the proposed Echo Park dam, about foundation geology and design at Glen Canyon dam itself, and now about the protection the Bureau itself promised and proposed for Rainbow.

It had been Major John Wesley Powell's dream, in founding the Geological Survey, to assemble at the seat of government a group of technical men who, upon need, would seek out facts, not conceal them. We know that this proud agency has men in it who can uncover the facts in this critical controversy. We believe that geologists everywhere will understand that the conservationists' enquiry is valid—and has been evaded.

* * *

As of this writing (August 21) no funds have been voted to provide the promised protection of Rainbow Bridge National Monument. Under the leadership of the National Parks Association, several organizations, including the Sierra Club, plan a pro forma *suit against the Secretary of the Interior to prevent the closing of the Glen Canyon diversion tunnels until the will of the people, as expressed in long and open debate before the Congress in the course of the Upper Colorado Project controversy, has been respected.*

This critical effort will be costly, but not so costly as the failure to try. Contributions are needed.—DB

May 14, 1962

Dr. Thomas B. Nolan, Director
United States Geological Survey
Washington 25, D.C.

The U.S.G.S. in the Rainbow Bridge Controversy

Dear Dr. Nolan:

A major conservation controversy now exists over the imminent failure to meet the requirements of the Colorado River Storage Propect Act of 1956 concerning the protection of Rainbow Bridge National Monument and the National Park System itself. A United States Geological Survey reconnaissance report by Wallace R. Hansen, several aspects of which Hansen himself describes as cursory, is broadly being interpreted as a reason for avoiding the Project Act requirement that Rainbow Bridge be protected from the waters soon to rise behind Glen Canyon dam.

A widely circulated statement of Senator Carl Hayden, for example, says: "All of the information available, including that supplied by the United States Geological Survey, indicates that though some water will reach a narrow channel under the arch it will not do any structural damage to the bridge."

Congressman John Taber wrote on March 5, "Information developed at hearings before the House Appropriations Committee disclosed that, in the opinion of experts, there would be no structural or geologic impairment of Rainbow Bridge from the waters of Glen Canyon reservoir."

Congressman Harold T. Johnson wrote on May 3, "Two geological studies have indicated to the Congress that the foundation of the Rainbow Bridge will not be injured by any water backing up from the Glen Canyon Project, and therefore, no protective works are needed."

Senator Hart wrote recently, "Again information was given to the committee indicating that no structural damage would occur to the bridge as a result of the waters of Lake Powell entering the monument."

House Report No. 1125, 87th Congress, 1st Session, dated September 6, 1961, states on page 44: "The geological examination report on the problem indicates clearly that there will be no structural damage to Rainbow Bridge by the reservoir waters beneath it."

A Department of the Interior report antedating these quotations took the opposite view. On page 192 of House Document No. 364, 83rd Congress, 2nd Session, under the general heading, "Effect of Glen Canyon Reservoir on National Park Service areas," appears the following: "However, by far the most serious effect of floodwaters reaching the bottom of the watercourse beneath the span would be the danger of undermining the buttresses of the bridge itself. Standing water would dissolve cementing materials in the rock causing the sides of the water (*sic*) to slough off, thus rapidly narrowing the supports beneath the ends of the bridge. It is conceivable that the water backing up no farther than to cause standing water in the watercourse beneath the bridge, softening and sloughing of the banks of the watercourse could be, in a relatively few years, sufficient to cause the weakening of the ledges beneath the ends of the bridge and the collapse of the bridge itself." Later, under the same heading, appears the statement, "The sponsor has given assurance that adequate protective measures will be included in plans for project development."

This assurance subsequently took form in Bureau of Reclamation testimony telling of the feasibility of the protection. The language of the Project Act required that it be provided. The Bureau later proposed several methods but initiated none.

All this is prologue to the critically important question: *Does the Survey believe that the Hansen reconnaissance should serve, and intend that it serve, as the basis for the change in attitude from Departmental concern about geological danger to official assurance that there is no cause for geological concern?*

It seems clear to us that if the Hansen report is sound in its concept, and if it has also been based upon a careful searching out of all relevant facts, and if further, in consideration of the importance of the controversy of which it is part, it has been meticulously checked by others who are competent to corroborate or question Hansen's observations about his own and about other specific fields of geology, then the Survey will have done all it could. The entire issue in the controversy would then need to hinge on other matters—legal and political in nature.

If these conditions have not been met, then no one knows with certainty how much irreparable damage to an irreplaceable geological exhibit—Rainbow Bridge and its environs—the reservoir commemorating John Wesley Powell is all too likely to cause.

The organizations working closely with us in this matter, and who have helped prepare this letter, recognize that a reconnaissance is not enough. Further field studies may be necessary to judge the importance of the threats that have been brought to our attention. It would seem necessary to put the report in perspective, particularly in consideration of the study-time limitations the report itself acknowledges, in order that it not be used for more than it is.

For this reason, we ask to what extent the Survey feels that its report faces several geological questions which are assuming a transcendent importance. We list these questions in the enclosure. We should appreciate an immediate response to those questions which the Survey can answer promptly on the basis of data already gathered and evaluations already made. If some questions cannot be answered without further field studies, a statement to that effect with respect to each of them will provide interim perspective.

We press this matter upon your attention at this length because we feel the issue is of major conservation importance and because we are sure that the Survey wishes to avoid any distortion of its position on the possibility of structural damage to Rainbow Bridge itself or damage of other kinds to Rainbow Bridge National Monument.

We are sharing copies of this request with several leading citizens who are deeply concerned in what is happening.

Sincerely,
DAVID BROWER
Executive Director

ENCLOSURE

Geological Questions About the Safety of Rainbow Bridge

(Note: Each of the four groups of questions herein is annotated so as to try to clarify the intent of the questions. Where it is thought helpful, a premise or hypothesis is stated, with the understanding that Survey answers neither deny nor affirm any assumptions in the questions.)

Submitted by the Sierra Club in coöperation with forty conservation and outdoor organizations

I. The Hansen Report for the U.S. Geological Survey

Guided by Reclamation Bureau Regional Geologist J. Neil Murdock, Wallace R. Hansen spent September 23, 24, and 25, 1959, in the monument area, visiting eight areas. There is widespread concern that the opportunity for investigation did not match the need for it, considering the intense national interest in what is happening at Rainbow Bridge.

1. Approximately how many hours did the party have for on-the-ground study of Rainbow Bridge and its immediate vicinity and how many hours for the other seven areas visited in those three days?

2. How extensive was the direct coverage, on foot, of the immediate vicinity?

3. Was the administrative report of the Hansen party's reconnaissance—if that is what the study is considered to be—approved by the Director for open file or for publication?

4. Hansen states that the purpose of his "brief geological examination . . . was to obtain an *independent opinion* as to the geological feasibility of various proposed measures intended to protect the

monument, under the provisions of Public Law 485, from impairment by the waters of Glen Canyon Reservoir." He also states that "the sites of all proposed barrier dams described by the Bureau of Reclamation were visited, but only cursory examinations were made of sites A, C, and an additional site referred to as the 'Narrows,' inasmuch as these sites are *discounted as impractical by both the National Park Service and the Bureau of Reclamation.*" (Emphasis supplied.) [In other words, how "independent" is a study which accepts conclusions already made about the facts being independently studied?]

It would appear that in the final two pages of his report he went beyond the purpose of his examination in briefly discussing "Effects of possible standing water under Rainbow Bridge," therein concluding: "There appears to be no valid geologic reason to fear structural damage to Rainbow Bridge," that "Intermittent wetting with reservoir water would only duplicate already existing conditions," and that "It thus is clear that any possible impairment to the bridge from fluctuating standing water beneath it would be esthetic rather than geologic or structural."

In view of the questions which follow, does the Survey consider the reconnaissance data adequate to support these conclusions?

5. If the Survey, mindful of issues now being raised, were to plan an investigation that did not seek an independent opinion of geologic feasibility of protective measures, but sought instead to appraise adequately the direct and *indirect* effects of fluctuating water in Rainbow Bridge *National Monument,* what new lines of enquiry would be necessary or advisable?

II. *Stream Erosion*

We believe it would be of great value for the Survey to predict stream-erosion assuming two possibilities.: (a) that the Rainbow Bridge arm of Lake Powell would lie under the bridge and deposits would be laid down in the inner gorge and be distributed along the channel as a result of reservoir fluctation, and (b) that in a period of 50 to 150 years the inner gorge below the bridge would be filled with boulders, cobbles, gravel, sand, silt, and driftwood and that the stream would override the deposits.

Granting these assumptions:

(1) Could these processes lead to undercutting of the buttresses of Rainbow Bridge as a result of erosion by a stream meandering on the surface of aggraded sediments and (or) by lateral cutting along the margins of such an aggradation?

(2) How much undercutting of the buttresses could take place without the bridge's collapsing?

(3) If these sediments should aggrade to an elevation six feet higher than the maximum reservoir level and thus reach the base of the lower buttress, would overriding flash floods, in which volume of flow is no greater than those leaving recent records in the present channel, be thought to endanger the bridge?

(4) If continued aggradation reached the base of the higher buttress, 18 feet higher than reservoir level, would similar flash floods be thought to endanger the bridge?

(5) Were these matters investigated carefully in the Hansen reconnaissance?

(6) On the basis of present knowledge in possession of the Survey, is there any possibility that part or all of the two assumptions made above are correct?

III. *Cementing of Materials and Collapse of Geological Features*

When a slight addition to the height of Glen Canyon dam was proposed during the Colorado Project controversy, the Department of the Interior expressed serious concern about cementing of materials in the Navajo sandstone at the damsite. Collapse of the face of The Temple shortly after the filling of Lake Mead would appear also to have been related to the cementing of materials. There are reports that both The Temple and Rainbow Bridge are formed of massive rock atop a thin-bedded, less resistant rock. The rock at Rainbow Bridge would seem to be more consolidated than that of The Temple, and hence resistant for a longer period; but the collapse of The Temple strongly suggests the possibility of a similar collapse of Rainbow Bridge. This possibility is not mentioned in the Hansen report.

1. Has the Survey studied the collapse of The Temple sufficiently to determine its cause conclusively?

2. Is it known whether relevant factors leading to this collapse are also present at Rainbow Bridge?

3. Do Survey geologists feel that this collapse might have been predictable, or was the result an unexpected one?

4. Could the collapse have any bearing on what might happen at Rainbow Bridge?

5. The Hansen reconnaissance states that at Rainbow Bridge "intermittent wetting with reservoir waters would only duplicate already existing conditions." If, however, the fluctuations of the reservoir result in leaching of natural cementing materials from the rock at a greater rate than is occurring today, Rainbow Bridge could collapse as its sandstone base decomposes. Accordingly, would it be pertinent to evaluate the rate of removal of these substances by the reservoir and their present rate of removal, or deposition, by ground water?

6. Have any studies been made which indicate the precise nature of the natural cementing materials in the Kayenta and Navajo formations in the Rainbow Bridge area? If so, what are these substances and what are their maximum solubilities in the ground water of this area and in the waters of this part of Lake Powell, which may be of different salinity, etc., from present ground water.

7. Have any studies been made of the ground-water concentrations of these substances, as well as likely lake-water concentrations, in (a) the seeps and springs near or under Rainbow Bridge, (b) at depth in the rock near or under Rainbow Bridge, or (c) elsewhere along the several hundred miles of future shoreline of Glen Canyon reservoir?

8. Do answers to the foregoing question, or do any other studies, indicate whether these substances are being removed or are being deposited in the portion of the bedrock near the canyon walls at this time?

9. Has the Survey any estimates of maximum and minimum concentrations of these substances anticipated for any areas of the Glen Canyon reservoir shorelines, including especially Rainbow Bridge National Monument? What is the predicted percentage of error for such estimates? (This question may clarify question 7, above.)

10. Can any conclusive prediction be made about the rate of removal of these substances as a result of fluctation of the reservoir?

IV. *Reservoir Weight and Solution Cavities and Karstic Phenomena*

The Survey has previously published about the effects of Lake Mead's being loaded upon its basin and producing hundreds of local earthquakes. Lake Powell will presumably be of about the same gross weight, or about 40 billion tons when full. Limestone is reported in the exposed Jurassic section at Rainbow Bridge, which may imply the existence of zones or lenses of rock which are much more soluble than the predominant sandstones. The possible occurrence of pseudokarst is mentioned in literature describing a near-by area similar in stratigraphy and structure to the Rainbow Bridge area. Development of these extensive, steep, narrow, collapse features in Rainbow Bridge National Monument as a result of the filling or fluctuation of the reservoir would seem to pose the danger of collapse at Rainbow Bridge. The same would be true of limestone solution cavities. The Hansen Report does not mention any of these subjects. Accordingly:

1. Considering Lake Mead observations, can it be stated conclusively whether the weight of Glen Canyon reservoir at surface elevations 3,590 (the downstream border of the monument) and 3,715 (the maximum reservoir level) is sufficient to cause any significant subsidence or differential movement in the Rainbow Bridge area?

2. Again judging from Lake Mead data, is it possible to estimate

the frequency or intensity of earthquakes that will be caused by Lake Powell in the Rainbow Bridge area?

3. Does the Survey have detailed information indicating how extensive are those limestone portions of the Jurassic formations which are exposed near Rainbow Bridge?

4. At present can it be stated conclusively whether this limestone is of sufficient extent to permit the development of significant solution cavities and other karstic phenomena as a result of alternation of the water table and subwater table flow by the fluctuating reservoir?

5. Are there open-file or published reports or any other Survey data on the extent or cause of pseudokarst within fifty miles of Rainbow Bridge and would field studies be necessary to evaluate more fully superficial and deep-lying pseudokarst in this general area?

6. On the basis of present knowledge, is it possible to estimate the total effect of reservoir-caused subsidence, differential movement, and earthquakes on (a) Rainbow Bridge and its supports, (b) the canyon walls within the monument, and (c) the pseudokarstic or karstic phenomena which may exist or may develop in the Rainbow Bridge area upon filling of the reservoir?

V. Summary Question

If details are not available, what studies would be necessary for an adequate evaluation to assure that Rainbow Bridge is free from man-made threat to its structural safety?

Washington, D.C., May 18

Dear Mr. Brower:

Thank you for the note of May 14 which accompanied the massive document of the same date. Since "time is of the essence," I shall direct myself only to the heart of the matter—the adequacy of the Geological Survey's administrative report dealing with Rainbow Bridge.

Responsibility for the field investigation, interpretation of the field observations, and preparation of the report was assigned to a Survey geologist of demonstrated talent and competence in his chosen field of engineering geology. I have complete confidence not only in his competence but in the honesty with which he carried out his assignment. The conditions under which the study was made, and the results that Mr. Hansen felt were warranted by the study, are known to so many interested individuals and organizations that it should be treated like the rest of the world's scientific literature. In the natural sciences most of the factors that contribute to the solution of a problem are variables that have a range of values. There are few instances in which the evidence in support of a single positive conclusion has been acceptable in toto to all workers in the field. The scientific method provides for independent verification and revision of findings, commonly by other approaches. Debate and legalistic cross-examination of completed work is mainly useful when it generates ideas and enthusiasm which lead others to further scientific inquiry.

Major Powell, I venture to guess, was familiar with the following quotation from Aristotle:

> The search for Truth is in one way hard and in another easy. For it is evident that no one can master it fully nor miss it wholly. But each adds a little to our knowledge of Nature, and from all the facts assembled there arises a certain grandeur.

The Major's sword and portrait in my conference room are a constant reminder that old geology is always open to further study by serious investigators who believe that the contributions they can make justify their time and effort. This is one of the ways in which science moves and advances.

Sincerely yours,
THOMAS B. NOLAN
Director

San Francisco, July 5

Dear Dr. Nolan:

We find deeply disturbing your dismissal of the several important questions, expertly advised and seriously asked, in the Sierra Club letter of May 14 about the geological threat to Rainbow Bridge which Lake Powell is likely to pose. We now ask once again that you address yourself and your distinguished Bureau to them. It may be that you have not understood how vital they are.

We are certain that the Nation's conservationists—and probably students of public administration and of the posture of Science—would appreciate prompt answers to the several questions that can be answered promptly, and an estimate of when you will attempt the more difficult but nevertheless critical answers.

Sincerely,
DAVID BROWER
Executive Director

P.S.: As my note to you from the Cosmos Club pointed out, time is of the essence. Because so much time has been lost in obtaining the answers, we are publishing the exchange to date, including this further request.

Washington 25, D.C., July 18

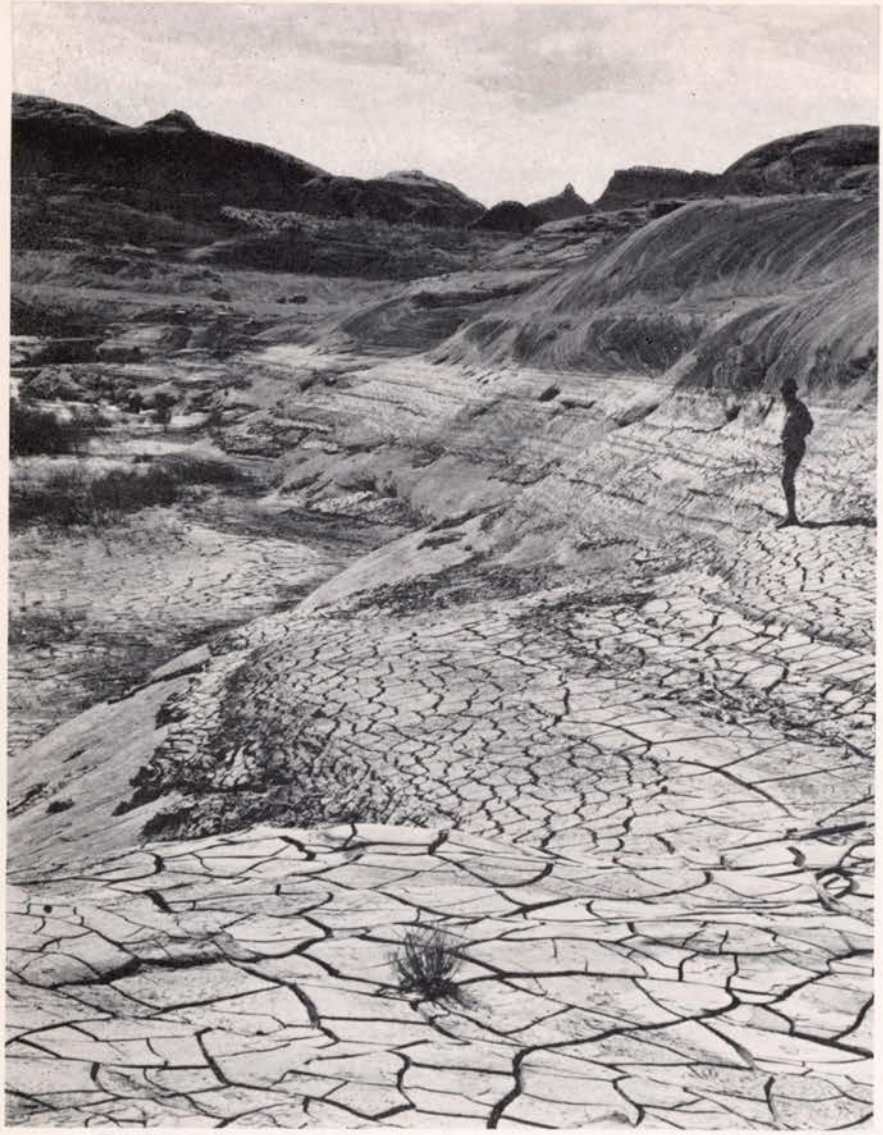
Dear Mr. Brower:

In my previous correspondence with you and with Mr. Latz of The Mountaineers, I have endeavored to show that no person or organization can guarantee that a particular physiographic feature will endure for any specified period of time. Natural causes will inevitably lead to the disappearance of an individual feature from the landscape and the natural sciences have not yet progressed to the point where they can predict exactly when this will take place. To advance the natural sciences to the stage where a specific determination regarding an individual feature can be reasonably attempted will require a great many independent studies, the inspired correlation of a multitude of seemingly unrelated research, and probably also some flashes of insight to some brilliant minds. This kind of effort is not readily programmed and directed to come up with definitive solutions; it comes out of the intelligent pursuit of fundamental knowledge which threads its way through the multitude of variable factors which are characteristic of natural phenomena.

The Sierra Club and The Mountaineers have posed sets of questions that would require a massive research and survey program to answer, if the answers were to meet proper scientific and engineering standards. These questions regarding the expectable history of Rainbow Bridge call for reanalysis of the facts and interpretations propounded by investigators in a large segment of the geological sciences over many, many years. The facts and interpretations have dealt, almost without exception, with variable factors and wide-ranging determinations. These could not be extrapolated and projected with certainty to the situation at Rainbow Bridge, hence a single positive determination could not be expected, even after a vast amount of work had been done.

I do not know how long Rainbow Bridge will stand, but it cannot stand forever—it may last for centuries or it may collapse from natural causes in the near future. Mr. Hansen has concluded that the anticipated changes in conditions resulting from the filling of Lake Powell will neither shorten nor lengthen the life of the arch. I am satisfied that the conclusions were arrived at by a competent investigator using the knowledge and experience available, and that the conditions of the study and factors considered are adequately stated in the report so that others may use it as a basis for further research.

Sincerely yours,
THOMAS B. NOLAN
Director



RICHARD NORGAARD

Preview, Lake Powell

Writers of rhapsodies about the new recreational resource expected to appear when a fluctuating reservoir substitutes for one of the natural wonders of the world should take another look.

For some reason the Glen Canyon dam diversion tunnels could not handle the peak of the spring run-off this year. For a few days the water was up as much as 25 feet above the river level on July 15 when this photograph was taken—just upstream from the Kane Creek take-out point.

Result—a preview of what will happen along hundreds of miles of canyon and sidestream shorelines—was a sea of mud, like quicksand where it has not yet drained, and cracked like the mud desert at Lake Mead's upper reaches. Tapestries laid down through the years were destroyed in days. Talus slopes sloughed away. Tamarisk survived, but little else.

There would be a new recreational resource, but something comparatively common, at the expense of an unequaled and irreplaceable gesture of the earth.

Many citizens are now asking that Glen Canyon dam be mothballed until it is proved really needed. Funds that would otherwise be expended for its completion could be diverted to worthy projects needed now—and projects that do not destroy the world's great scenic resources.

DAVID BROWER

Gravemarker. A shield of cracked mud, complete with rapidly germinating seedlings of tamarisk, is a symbol of the burial in store for the delicate living things and the grand architecture that made Glen Canyon a scenic wonder of the world.

Once the diversion tunnels are allowed to close at Glen Canyon dam, the burial in silt will proceed swiftly. Less than half a normal year's runoff will inundate forever all the familiar living space, all the essential habitat, thousands of acres of unspoiled, unparalleled canyon-wall sculpture, and three thousand miles of Colorado River and sidestream glens. *And all this for kilowatts that could come more cheaply from alternate sources, and would waste less water if they did.*

Proposed Northern Cascades National Park

Moratorium Urged to Save Parkland Trees

[From *The Wild Cascades,* (North Cascades Conservation Council)]

Completion of Washington's golden triangle of national parks, through the creation of Northern Cascades National Park, is steadily gaining support and momentum. However, the Forest Service has greatly accelerated the pace at which it is planning timber sales in the very forests which belong in this park.

To slow down this multiple-use logging threat to some of Washington's finest scenery, Congressman Thomas M. Pelly on July 19 asked Secretary of Agriculture Freeman to halt this logging temporarily to permit a sane and careful evaluation of the park values.

Dear Mr. Secretary:

As you may be aware, considerable local and national public interest is currently being voiced in support of designating appropriate portions of the Washington Cascade Mountain Range is a Northern Cascades National Park.

In this connection in August of 1959 I addressed a letter to the then Chief Forester, Richard E. McArdle, requesting that a study be made by the National Park Service of certain portions of the Washington Cascades which are under the administration of the U.S. Forest Service. This request was denied.

As a consequence, I introduced legislation in the 86th Congress, and again in the 87th Congress, authorizing and directing the Secretary of the Interior to conduct studies of the national park potential of Washington's Northern Cascades. As of this date the legislation is still pending. It is anticipated that more specific legislation will be introduced in the near future, designating in detail a proposed Northern Cascades National Park. Meanwhile, I am seriously concerned with respect to a number of areas that should be included in such a park. There is a strong possibility that these areas are, or will be, irrevocably committed to commercial timber harvesting through the application of Forest Service multiple-use plans.

The purpose of this letter, therefore, is to request your coöperation in establishing a moratorium on further logging, as well as suspension of any long-term commitments within each of the specific zones . . . shown on the enclosed map, until the national park potentialities have been adequately assessed by the Department. . . .

These twenty zones are of the very highest scenic worth in that each of them penetrates within the very heart of glacier-laden portions of the Cascades. Each zone is considered as part of a scenic whole, along with the Glacier Peak and North Cascades Wilderness areas. Each zone was arbitrarily limited to elevations below 4,000 feet in the respective watersheds and selected because of the threatened loss of its scenic and optimum recreational values through imminent possibility of the harvesting of commercial timber.

The Department of Agriculture has released its policy for the "High Mountain areas of the National Forests in the North Cascades of Washington"; and I believe that the request being made here is not inconsistent with the "high mountain study" in that each of the twenty morarium zones may lie entirely or partially outside of the area encompassed by the study.

I have personally discussed this matter on an informal basis with Forestry officials with little or no satisfaction. Consequently, I am constrained to bring it to your personal attention. As you know, the Administration has announced a policy of expanding the National Park System, as pointed up in President Kennedy's Natural Resources Message to Congress (February, 1961):

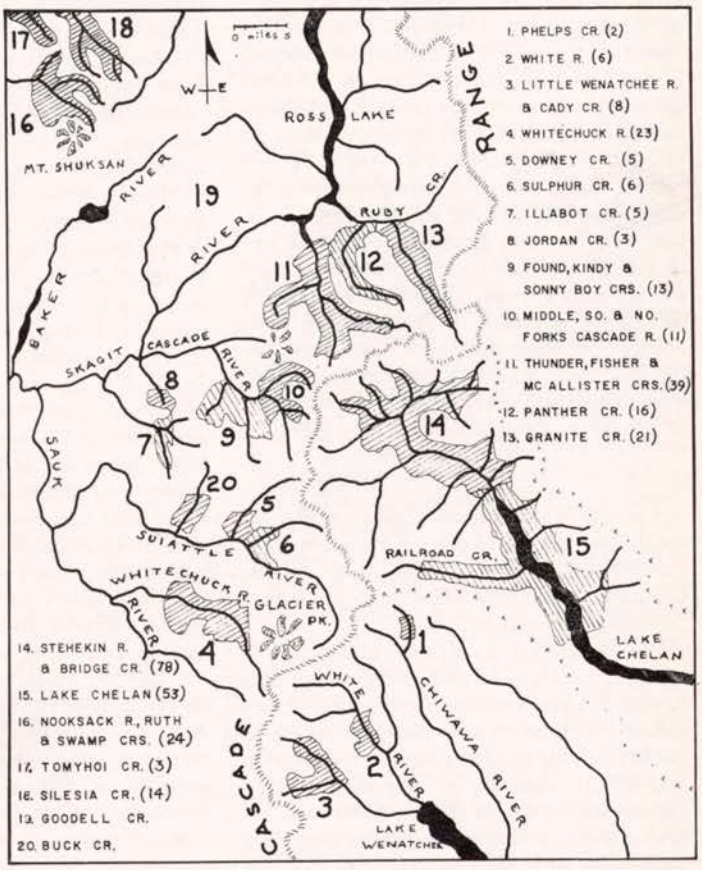
"I am instructing the Secreary of the Interior, in coöperation with the Secretary of Agriculture and other appropriate Federal, State and local officials and private leaders to . . . conduct a survey to determine where additional national parks . . . should be proposed."

Inasmuch as the superlative scenic qualities of the North Cascades in my judgment qualify the area for inclusion in this expansion program, I trust you will agree:

1. To placing a moratorium on further logging in the areas listed.
2. To permitting a study to be made by the Secretary of the Interior in coöperation with the Secretary of Agriculture of the central and north Cascades region lying generally between the Stevens Pass highway and the Canadian border, to determine the national park potentialities of this region, as pointed up in the legislation I have introduced for this purpose, H.R. 2056.

This is a matter of extreme urgency and I hope it will receive your prompt and early attention. THOMAS M. PELLY

Note: Explaining the accompanying map, Congresman Pelly asks that the areas numbered 16 through 19 be included in the logging moratorium pending the outcome of a study of their reclassification as areas wherein timber harvesting is excluded, and all other numbered areas be included pending the outcome of a study of their national park potentialities. Areas 1 through 3 are in Wenatchee National Forest, total area of which is 1,880 square miles. Areas 14 and 15 are in Okanogan National Forest, total area of which is 3,190 square miles. The others are in the 2,840-square-mile Mount Baker National Forest. Area involved in the moratorium request is 4.4 per cent of the total acreage of the three forests.



Your Support Is Urgently Needed!

1. Write Secretary Freeman in favor of Mr. Pelly's moratorium;
2. Please let the North Cascades Conservation Council (3215 N.E. 103d, Seattle 55, Wash.) know when you write by a postcard or a carbon copy of your letter.

PLEASE WON'T YOU WRITE NOW, TODAY, THIS WEEK!

Book Reviews

Silent Spring, by Rachel Carson. *The New Yorker,* June 16, 23, and 30.

Rachel Carson's contribution on chemicals versus environment and the life force have already excited a great deal of attention. Augmented with further material on biological controls for what man now considers to be pests, these articles will appear in book form in October under the same title (Houghton Mifflin). *Silent Spring* is also a Book-of-the-Month Club selection. As could be expected, some overconfident people in the chemical business—and highly educated ones at that—are already scoffing at this most timely piece of calm exposition of major hazard. Chemists say they know what they are doing. We are sure they do—up to a point. It is at that point that Miss Carson's alarming analysis begins. —D.B.

Lewis Herbert, in *Our Synthetic Environment* (Knopf, $4.95), examines new environmental problems and seeks "a point of view that will enable us to eliminate various ills without throwing away any of the benefits conferred upon us by modern technology and science." In subject-by-subject analysis of soil fertility, chemical fertilizers and sprays, pollution, and urban tensions, he shows how the natural environment of air, soil, and water is being drastically altered to the serious detriment of other organisms and of man himself. Herber's main thesis: for all the advances in medicine and technology over the past decades—man is poisoning his environment, impairing his health, even jeopardizing the genetic development of generations unborn. —R.D.B.

The National Audubon Society has recently published *A Nature Center for Your Community.* In transmitting a copy of this handsome, functional booklet to us, author Joseph J. Shomon writes:

"In an attempt to better acquaint people with the concept of community nature centers or outdoor education areas, the Nature Center Division of the National Audubon Society is preparing a series of informative and how-to bulletins on how these worthy conservation projects can get under way. . . . We cannot do this conservation education alone and hope we can count on you for support. Copies of this publication are available at $1 per copy, which is exactly the publication and mailing costs to us."

President Carl W. Buchheister's preface stresses the importance of the nature-center concept and we emphatically agree. We have a booklet on the subject ourselves (*Nature Next Door,* by Professor Robert C. Stebbins) and think you should by all means have both, but only if you care about what kind of world children grow up in.—D.B.

Whose Woods These Are (Doubleday, $5.95). In "South of Cornucopia," Michael Frome tells how the Forest Service rehabilitated an area in northern Wisconsin which had become a barren wasteland after the timber ravages of the late 1800s and early 1900s and after further clearing and burning by would-be farmers. "Loggers of the Olympic Peninsula" discusses the change in logging attitudes and techniques over the past few decades and lauds sustained yield.

"Wilderness Sentiment and Science" tells how the wilderness idea began with Aldo Leopold and was brought to maturity through the work of Robert Marshall. The views of the opposition—the lumbermen, miners, cattlemen, are presented. "Happily," then says Frome, "we have more than timber groups to speak for us, and to furnish testimony on whether wilderness serves a single use, dual use or many uses. Biologists, ecologists, and other scientists measure wilderness in more than immediate human terms. . . .

"Add these people together and you have a force which the Seattle *Times* called a 'powerful lobby of extreme conservationists.'" —R.D.B.

. . . And Previews

Ansel Adams's new book, *These We Inherit: The Parklands of America,* is such a transformation to his *My Camera in the National Parks,* and *My Camera* was already so beautiful, that we're glad we have both (one to publish, the other to distribute).

It is the twelve new subjects, not just the new size, type design, cloth binding, foreword, and revised text, and not just the sudden shortness of supply of *My Camera,* that make the new Ansel Adams book timely.

The new subjects in *These We Inherit* are for the most part places that are not national parks, or not *yet* parks, but that should be treated as if they were, and that ought to be. As the Foreword to *Wilderness: America's Living Heritage* says, we (you and all your friends who care about what makes America worth living in) are in the Decade of the Last Chance to Decide. Among other things, we have to decide how much more we will tolerate of the kind of thing that very special, after-us-the-deluge, unfortunately selfish interests (and we mean every word of that long label) have been trying to do to the Wilderness Bill. Or how much more wanton logging we will tolerate right in the heartland of areas that are still in deep controversy, and should therefore be held in escrow. Or how much we will let Blind Progress precommit some of our greatest scenic areas to commercialism, using diamonds for common abrasive.

Ansel Adams has many uncommon abilities. He has genius, and we use the word with great conservatism. His photographs show where the diamonds are. Some of them are already as safe as our laws know how to make them—specifically the National Park Act, which requires that use of the great places be so regulated as to preserve them unimpaired for the enjoyment of this and future generations. The Act is by no means always observed, but man hasn't yet figured out how to be perfect, and we can all of us, always, try to interpret that Park Act better.

But a good half dozen or so absolutely superb scenic areas still remain and they are not safe at all. Every crass element in our society seems bent on reducing them to mediocrity before the public wakes up. Boldness could save them and timidity prevails.

Ansel Adams is bold. His composition is bold. He is bold in what he selects to compose. He is bold in his execution. He is boldly and absolutely insistent in what he expects to have printers do with his prints. He is equally so, thank Heaven, in what he wants our government to do out of respect for the great places.

Help get his book around!

When a great writer like the late Bernard DeVoto tags you and says you are the man who should really take up conservation writing in earnest, people don't forget. This is what DeVoto did to Wallace Stegner, novelist, Professor of English, Director of the Creative Writing Center at Stanford, member of the National Parks Advisory Board, and so on; and we haven't forgotten. The Sierra Club leaned heavily on Professor Stegner in 1955 and persuaded him to edit *This Is Dinosaur.* It was (and is) a beautiful book. Alfred A. Knopf published it and the Board of Directors elected both men honorary members of the club.

We tried again, next time for a book on the Olympic country. We got the book, all right, but from a different author, a Stegner student. Meanwhile, however, Wallace Stegner let us have one of the most beautiful pieces ever written about wilderness (Secretary Udall used it for his speech at the Wilderness Conference in 1961 (see *Wilderness: America's Living Heritage*) and it has been

reprinted in various places since then, including the ORRRC Wilderness Report it was written for. He also agreed to serve on the club's Publications Committee.

We are happy that we could persuade him that he was the only man who could write the Foreword to the Olympic book.

He did, and we were right. The book is *The Peninsula,* by Don Moser, a young man who has just completed an assignment as special assistant to Secretary Udall. Professor Stegner took leave from Stanford to render similar service to the Secretary. If DeVoto were still around, we think he would have high praise for what Don Moser has written for us. It is quite different from anything we have ever done before.

SPECIAL REQUEST: When you read Sierra Club books, please don't start in the middle or the back, because it destroys us when you do. They are designed to be read from the beginning! You wouldn't start a Beethoven symphony and jump the needle here and there. Our books aren't Beethoven; just the same we try to get something flowing in them—from the jacket to the case to the end (and beginning) leaves to the half title to the (usually) expanded frontispiece to the title spread and so on to the book itself. No short cuts, please!

The book should be off the press any minute. If the book lives up to the promise of the lithographer's brownlines, Don Moser's photography will come through amazingly (there are some terribly exacting subtle tones in his work). His text is superb right now. And as Wallace Stegner has said, the book is a perfect marriage of word and photography. We will add that our Director of Creative Writing was a first-rate marriage counselor.

Ingenuity in an exhibit. The Milwaukee Public Library neatly displays photographs from Cedric Wright's book, *Words of the Earth.* They borrowed no negative to make the panel; instead, they made enlargements from the book itself.

The first copy of *Island in Time* was handcarried on August 19 to the man who wrote its Foreword, Secretary of the Interior Stewart L. Udall. The Secretary spent the night in San Francisco after he had accompanied President Kennedy to Yosemite and to the dedication of the San Luis Project. The Cardoza Bindery, in San Francisco, beat its own schedule by four days so that the club's executive director could have a copy for the Secretary to scan at breakfast and read on his way back to Washington. The Secretary looked impressed, and we think he had reason to be. Among the many who worked hard, and against rougher odds than ever expected, were all the hands at Gillick Printing, in Berkeley, who did the composition and presswork. The Secretary has worked equally hard for Point Reyes.

As of now, people have ordered 1,000 copies before the book's actual emergence. It ought to do extremely well. If the National Seashore "washes away," as the subdividers have been openly hoping, the book will be a good record of what used to be unspoiled on the Point Reyes Peninsula. If the President signs the right bill (he urged it again at the San Luis dedication), and if Congress or other sources provide funds soon enough to permit the essential land acquisition, then the book will provide a beautiful way of interpreting the Peninsula for a long time to come.

If all goes well, *"In Wildness Is the Preservation of the World,"* our most ambitious publishing effort, will be off the color press this month. While you read these lines, photographer Eliot Porter and executive director Dave Brower, if their plans work out, will be watching the sheets come off the four-color press at the lithographer's in New York. They'll be watching not just for the pleasure of seeing a blank sheet fed into one end and sixteen beautiful four-color illustrations delivered on each sheet at the other end, but also to see that they are right —all 72 plates per book.

Both representatives of the club were at Barnes Press, in mid-July, correcting the first proofs. Samples of the color proofs, even before correction, have been opening people's eyes across the country. Already, 1,500 copies have been ordered—quite amazing for a $25 book—and the word is only beginning to get around. The amazingly beautiful title-page illustration will appear on some 150,000 mailers the bookstores will be distributing and on the club's 75,000 winter catalogs. Probably the most impressive advance notice, however (other than word-of-mouth news from other people as soon as they see the book), will come from an 8-page section in the December *American Heritage,* which will enable the 340,000 subscribers, plus an equal number of people looking over their shoulders (double that number if they have two shoulders), to see five of the color plates, plus examples of the Thoreau text Eliot Porter selected and an excerpt from Joseph Wood Krutch's impressive introduction.

The only trouble with the *American Heritage* piece is that it will not be in the mail until the Christmas rush begins. So we hope a good many members will have their own copies on display long before then.

Clear a place in your house now! The book is the same size as *American Earth* and will be ready to ship from New York on September 14, or so the Sendor Bindery assures us. They ought to know, because they are just two flights below the printer; even if New York were to have a September snow, it is probable that the elevators would keep running.

Members who read their new *Explorer* and enclosures carefully know that there is a very worthwhile prepublication offer on *"In Wildness . . ."* still in effect. Formal publication day is October 29, but *you* may look sooner.

Letters

Annual

Tucson, Arizona, April 23

To the Executive Director:

Scuttling the *Sierra Club Bulletin Annual* amounts to cancelling the record on two of the three activities of our seventy-year-old outdoor organization. The club's stated purpose is "To explore, enjoy and preserve scenic resources of the United States . . ." The monthly *SCB* serves admirably as a news record of conservation progress, which covers "preservation," but without the Annual who would ever know we had time for "exploration" and "enjoyment"? Or even considered them desirable?

What the Annual lacks is loving care. You say it costs over $9,000 to publish and it suffers from lack of good material submitted. What is needed is an honorarium of $25 for each article accepted. That isn't a royal sum, to be sure, but it is an incentive which, I am convinced, will enormously increase the amount and quality of material submitted. This additional sum of $125 to $150 would undoubtedly put the Annual back as the leading outdoor-mountain club journal in the United States.

I have the full set of the Annuals from 1893 to date. I have read them all and think they are the finest body of literature and research material on Western mountains, forests and deserts in existence. In fact, they are unique. Let's not destroy this heritage to future Sierrans without considerably more expression of opinion.

WELDON F. HEALD

• There will be an Annual this year—target date, December. But is $25/article really the measure of loving care? The executive director started influencing annuals in 1939, became editor after returning from the war, and as full-time staff member starting in late 1952 bears the onus for having stressed wilderness and park battles in monthly *and* annual. He feels that the quality of the annual will always depend upon there being people who feel strongly enough about something to want to express it—and that the writing thereupon almost takes care of itself, give or take a few commas.

Everest, 1963

Santa Monica, August 1

To the Executive Director:

A few days ago I talked to Will Siri over the telephone. To my surprise he was not aware of the fact that the Internal Revenue Service granted us tax-exempt status last June. . . .

Although tremendous progress has been made in our fund-raising efforts—(thanks to National Geographic Society, *Life*, Air Force Office of Scientific Research, National Science Foundation, etc.)—we are still in need of funds. It is our sincere hope that in view of the importance of the project and the definite tax-deductibility of all contributions, many members of the Sierra Club may be inclined to make contributions. Would it be possible to make an appeal in your next bulletin?

NORMAN G. DYHRENFURTH
Leader, American Mount Everest Expedition, 1963

• Yes. Consider this letter as the first suggestion to club members.

Number 20,000

The chances were one in five that the club's 20,000th member would be a junior, but never underestimate the ability of youth to overcome odds. Mark Sweet, of Hawthorne, California, did. Asked by Editor Bruce M. Kilgore to do a piece about his joining, he wrote as follows on August 8:

The first thing I'll begin with is the reason I joined the Sierra Club. I *had* to. I'm going on my second wilderness threshold trip to Young Lakes Yosemite.

I was born December 31, 1949, in Culver City. I'm now twelve years old. I will be in seventh grade next year at Roosevelt School.

I enjoy building with my Erector set, and I now swim with the Hawthorne Swim Club.

Two weeks ago I had the sickening, frightening and memorable experience of climbing to the top of Mt. Whitney.

My parents want to know if they may have four extra copies of the September Bulletin. Enclosed is one dollar to cover cost of same.

MARK SWEET

Mark Sweet

• The latest (1960) edition of the Sierra Club Handbook shows how steep a pitch the membership was climbing when it reached 15,000. We asked the artist to bring us up to date, freehand. Mark Sweet doesn't say so, but the steepness of the pitch on the chart indicates that he must have climbed the *east* face of Mount Whitney when he led us up to 20,000.

Washington, D.C., August 9

To the Executive Director

Upon receipt of copies of your exchange of correspondence with Dr. Thomas J. Nolan, Director of Geological Survey, relative to the geological threat to Rainbow Bridge which Lake Powell may pose, I contacted the Department of Interior and requested that I be supplied with details of the program they intend to implement to protect the Bridge.

The Secretary of the Interior has this date furnished me with a copy of Dr. Nolan's letter to you dated July 18, 1962 in which he points out that Mr. Hansen has concluded that the anticipated changes in conditions resulting from the filling of Lake Powell will neither shorten nor lengthen the life of the arch. Dr. Nolan further states that he is satisfied that these conclusions were arrived at by a competent investigator.

If you feel that you have not received a satisfactory explanation to your questions concerning possible damage to Rainbow Bridge by the reservoir waters, please let me know and I will be happy to again contact Interior on behalf of the Club.

With every best wish, I am

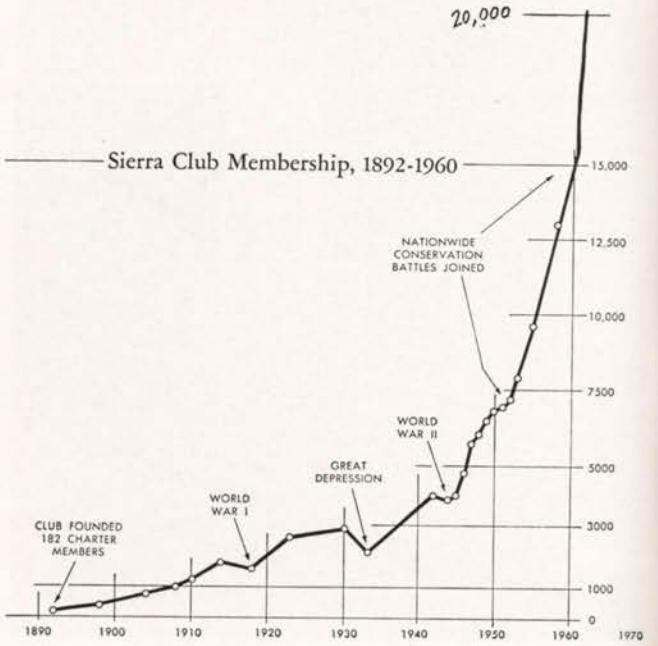
JOHN F. SHELLEY, M.C.

• There has been no satisfactory explanation (see pp. 10–14). There is disquieting renewal of activity at Echo Park (see page 19) and disturbing word that the Bureau of Reclamation is already at work clearing the way for its big Bridge Canyon dam that would invade Grand Canyon National Park and Monument.

1960

Club membership reached 15,000.

This Is the American Earth, by Ansel Adams and Nancy Newhall, was published as the first major club book, and as a direct result a major expansion in the club's conservation-publishing program was begun.



Mountain Talk

VIVID green conifers clothed the mountains for countless miles. As far as one could see, firs, spruces, and pines marched down the slopes, across the watercourses and valleys. Trees grew so thickly that most of them were rank and narrow, but the overwhelming impression was of verdure triumphant.

This was not the dry Sierra Nevada of slow growth and majestic, individual tree heroes. Storm clouds kept moving in on the glacier-clad peaks, and they seldom passed without releasing some of their moisture. Roaring rivers, constantly fed, swept a burden of boulders, gravel, and gray silt toward Hudson Bay, the Arctic, or the far-off Pacific.

The summer flowering in the uplands, on the forest floor, and beside the paths and pavements was abundant, and almost everywhere the ground cover of sphagnum, small plants, and decaying vegetation was wet, as deep as fingers probed.

In the Sierra a fallen tree is a solid bridge or obstacle, year after year. In the Canadian Rockies it is a husk, ready to collapse under foot into pulp.

The contrast between the moist, cool northern parklands, with their teeming, weedy growth, and the sun-drenched, vulnerable forests of the Sierra was sharpened by recent experience at home with management of the local watershed. Conservationist protest, of a basic woodman-spare-that-tree variety, had fortunately prevented "selective" logging of irreplaceable suburban groves.

It seems to be a different world north of the border. Not that tree-cutting cannot destroy the beauty of a watershed, for we drove past miles of desolation at Spray Reservoir, sacrificed to the energy needs of Calgary. But below the grinding ice of the great glaciers, below the compacted force of eons of rock history, plant and tree life grips the black soil with fierce ardor.

Lyall's larch, near timberline, is the most austere of needle bearers with its delicate, Japanese-print tracery of twigs and leaves. "It will grow on the rockiest of soils, even in crevices on steep, rugged slopes," says the manual, "provided that there is abundant moisture present." Last month, moisture was indeed plentiful.

Human ecology, and human erosion, of course, have a major role in altering the mountain scene. A century ago the Comstock Lode became "the tomb of the forests of the Sierras," says the author of *The Big Bonanza*. For a distance of fifty or sixty miles from Virginia City, "all the hills of the eastern slope of the Sierras have been to a great extent denuded of trees of every kind—those suitable for wood as well as those fit for the manufacture of lumber for use in the mines."

Dan De Quille, historian of the Comstock, wrote prophetically of the vast destruction wrought by those who wanted fuel and mining timbers and planks for flumes. They were, he said, "devouring the forest surrounding Lake Tahoe."

Now other interests are devouring the Tahoe scene, while its second growth receives the protection of a somewhat more enlightened public policy.

Climatic conditions must be taken into account, and so must human demands and true human needs. The returning traveler, home from a journey of discovery in northerly latitudes, feels compelled to draw a moral.

Wild growth obeys laws of its time and place. Discerning those laws, can we learn, soon enough, to abide with them?

FRED GUNSKY

Ominous Echo Park Stirrings

[*The following is excerpted from the July 25 "Washington Roundup," Washington newsletter of Senator Wallace Bennett of Utah.*]

END OF NEGLECT AT DINOSAUR . . . After establishment of Dinosaur National Monument in 1937, the area was almost forgotten by the federal government, and virtually no real development of the area was undertaken until the 1950s. The Mission 66 program has changed that, and today the monument is entering a new period of development. The visitors center, the development of the quarry area, the road improvements, have made important changes—and there are many more to come. Thus far, $1.6 million has been spent on improvements at Dinosaur under Mission 66. This will total $2.5 million by 1966, and $7,113,000 by 1973.

One of the most important projects now scheduled is the road connecting the Blue Mountain Mesa and the quarry area. Approval of this project resulted from three years of work by local groups, and I was happy to be able to work with them. This involved getting my amendment adopted authorizing the road. It will cost $3,387,500, and work will begin in 1965. A second road, the Red Wash road in the west end of the monument, will cost $485,000, and will connect the quarry area with the county road leading to the Rainbow Park and Island Park sections of the monument.

In connection with Dinosaur, I made a speech during the debate on the Wilderness Bill establishing a legislative record to indicate that it was not the intent of Congress that the Wilderness Bill should prevent future construction of the Echo Park Dam. If the bill had gone through without this fact being established in the record, this would have been one more hurdle to overcome in future years, when the Echo Park dam is sure to be taken up again in Congress. [!]

WALLACE F. BENNETT

[I have it on all-too-good authority that the Island Park—Rainbow Park complex is where the Bureau of Reclamation plans to build the construction-headquarters city for Echo Park dam. Several years ago we were getting possible donations ready to pick up private holdings there to be given to the federal government upon establishment of Dinosaur National Park. The Utah Fish and Game people dashed in and bought it for the state. They also want (and Senator Bennett in this newsletter pushes) a road into the Jones Hole headwaters which should by all means be kept absolutely unspoiled and part of the park. They want a big hatchery there. —David Brower]

INTRODUCTION

YOU CAN SEE IT from the vicinity of the Cliff House in San Francisco on a clear day, jutting sharply into the ocean on the northwest horizon, its seaward end rising like the head of an elongated whale. Sometimes from here the peninsula appears to be detached from the mainland, an illusion that has a solid basis in reality. This hundred-square-mile piece of land seems part of another world in space and time, isolated from the currents of change that are transforming the burgeoning urban complex of the San Francisco Bay Area.

Drive an hour beyond the Golden Gate and through the coastal hills to the west, cross a mammoth rift in the earth's crust, climb onto this peninsula and you travel back into the centuries.

Examine the granite cliffs and ridges and you go back a hundred million years to the time when most of California had not yet risen from the sea and this peninsula, like the Farallon Islands 25 miles away, was part of a great offshore land mass.

Explore the forests, meadows, lakes and streams, noting the rare shrub and tree species, and you go back to the epochs before the Great Ice Age.

Wander across rolling fog-swept downs or along deserted beaches and you turn the calendar back four centuries to the time when Francis Drake careened the *Golden Hind* somewhere on this coast and the treasure-laden galleon of Sebastian Cermeño was wrecked on this shore.

By some incredible aberration, this area has escaped, thus far, the frenetic tides of human activity that elsewhere in the region have erased the evidence of history, the plant and animal life, the natural forms of the land.

This is the Point Reyes Peninsula—Island in Time.

HAROLD GILLIAM

We each have a right to our individual odyssey on a stretch of sand,
to look outward and to look inward as nation and as man,
inspired by a sea-lapped shore.

STEWART L. UDALL, in his Foreword

Point Reyes from near Double Point. From *Island in Time: The Point Reyes Peninsula,* by Harold Gilliam, photographs by Philip Hyde. The book is 9x12 (slightly larger than this page), contains forty pages of plates, 8 in color, and comes either paperbound ($3.95) or in a cloth-bound library edition ($7.50).

This is also a new Sierra Club wilderness card, one of eleven showing Point Reyes Peninsula (four regular size and seven jumbo). Other wilderness cards are of the Northern Cascades, Washington; Volcanic Cascades, Oregon; Wind River Mountains, Wyoming; and the Sawtooth country, Idaho. Prices: giant 15¢, jumbo 10¢, regular 5¢. Write your chapter or Mills Tower.