



Big Sur: one of the great meetings
of wild ocean and almost-wild coast
that ought to be preserved in perpetuity.

Saving Wild Shorelands

One of the finest land-and-seascapes to be found anywhere is the Big Sur coast south of Monterey. It was to rouse support for preservation of the Big Sur country that the club published its latest Exhibit Format book, *Not Man Apart*. But we believe that the book, from which we borrowed this month's cover photograph, will serve a broader purpose. For many of the qualities that make Big Sur worth saving are also possessed in greater or lesser degree by shorelands elsewhere, and most of the reasons for saving Big Sur also apply to the Indiana Dunes, Michigan's Sleeping Bear Dunes, the Oregon Dunes, the Santa Maria Dunes south of Big Sur, the Channel Islands off Santa Barbara, the Colorado and St. Croix Rivers, the Hudson Highlands, and other shorelines threatened but not yet engulfed by commercial exploitation.

There is a special magic where wilderness lands and waters meet, but wildlands that are washed by waves are in shorter supply than landlocked wilderness. Even if every bit of shoreline worth saving were to be saved, there would be none too much.

How to Lie with Statistics

Statistics are all too often manipulated to "prove," to the satisfaction of some and the befuddlement of others, that conservation is hopelessly uneconomical. Two contributors to this issue of the *Bulletin* argue persuasively that conservationists are likely to be hoodwinked if they accept such statistics at face value.

Luna Leopold points out that failure to set any economic value on "intangibles" such as the preservation of wilderness and scenic resources results in unrealistic "cost-benefit ratios." He suggests that planners classify some resources as untouchable, and that engineering alternatives be considered only if they would leave the untouchables intact. Such an approach should lead to the conclusion, for example, that the true cost to society of dams in Grand Canyon is not merely prohibitive, but incalculable. John Condliffe argues that it is easy for highway engineers to justify pushing freeways through redwood parks if they select their criteria and weight them carefully. If strictly economic factors don't indicate savings, they lean on "comfort and convenience" and the "economic" virtue of being able to drive through redwoods too fast to see them.

Top Conservation Priorities

Two of the five conservation objectives assigned top priority by the Sierra Club Board of Directors are implementation of the Wilderness Act and rounding out of the National Park System. The other three top-priority objectives are more specific: establishment of a redwoods national park, protection of Grand Canyon, and establishment of a national park in the North Cascades.

Two of these specific objectives are already supported by books, *The Last Redwoods* and *Time and the River Flowing: Grand Canyon*. Before another issue of the *Bulletin* appears, the North Cascades too will have their book. *The Wild Cascades: Forgotten Parkland* will be the most convincing portable demonstration that the North Cascades deserve the protection of park status. The most convincing demonstration of all, if you can possibly manage it, is a visit to these spectacularly beautiful "Wilderness Alps of Stehekin."



Sierra Club Bulletin

JUNE, 1965
VOL. 50 — No. 6

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

COVER: Big Sur headlands and surf by Cole Weston from the new Sierra Club publication, *Not Man Apart*.

COMPREHENSIVE PLANNING AND THE DRAGON TO SLAY	<i>Luna B. Leopold</i>	3
THE ECONOMIC ASPECTS OF CONSERVATION	<i>John B. Condliffe</i>	6
THE BATTLE FOR INDIANA DUNES NATIONAL LAKESHORE		10
SCENES IN THE PROPOSED REDWOOD NATIONAL PARK		12
THE KERN RIVER WATERSHED: THREE PROPOSITIONS	<i>Lawrence J. Moss</i>	14
MORE FREEWAY REFORM NEEDED		16
THE 1966 TRIP TO NEW ZEALAND		17
THE BLM MEETS ITS CRITICS	<i>Michael McCloskey</i>	18
PENNINGTON GLEN CANYON FILM RELEASED		19
LETTERS		20
HELP NEEDED ON MT. EVEREST BOOK		21
A NEW PHASE IN THE CASCADES CAMPAIGN		22
WASHINGTON OFFICE REPORT	<i>William Zimmerman, Jr.</i>	23

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.

DIRECTORS

William Siri		President
Edgar Wayburn		Vice-President
George Marshall		Secretary
Lewis F. Clark		Treasurer
Richard M. Leonard		Fifth Officer
Ansel Adams	Jules Eichorn	Martin Litton
Nathan C. Clark	Fred Eissler	Charlotte E. Mauk
Pauline Dyer	Alex Hildebrand	Eliot Porter
	Wallace Stegner	

EDITORIAL STAFF

David Brower	Executive Director
Hugh Nash	Editor
Sidney J. P. Hollister	Assistant Editor

Published monthly, except July and August, by the Sierra Club, 1700 Fifth Street, Berkeley, California 94710. Annual dues are \$9 (first year \$14), of which \$1 is for subscription to the *Bulletin*. (Non-members: one year \$5; three years \$12.00; single monthly copies, 35c; single *Annals*, \$2.75.) Second-class postage paid at Berkeley, California. Copyright 1965 by the Sierra Club. All communications and contributions should be addressed to Sierra Club, 1050 Mills Tower, San Francisco 94104. *Reg. U.S. Pat. Off.

Comprehensive Planning and the Dragon to Slay

By Luna B. Leopold

The following two articles were originally given as speeches at the Ninth Biennial Wilderness Conference, which was held in San Francisco in April of this year.

Luna B. Leopold is Chief Hydrologist of the United States Geological Survey, Department of the Interior. His experience in the engineering field covers many aspects of water resources development, particularly in hydrology. He has been on the Survey staff since 1950 and has been Chief Hydrologist since 1957.

SEVERAL YEARS AGO I was in India as consultant to that government concerning a flood-control project on the Kosi River in the State of Bihar. The Kosi originates near Mount Everest and emerges from the Himalayas to flow southward for nearly a hundred miles across the Ganges plain. It is a braided river with an ill-defined channel consisting of many distributaries wandering around myriad islands in an unsystematic way. Owing to the fact that the Kosi has moved laterally across its low-angle fan about 75 miles in a hundred years it has progressively devastated by flooding large areas of agricultural land.

The Indian government had chosen as the most practical way to alleviate the flood damage, the construction of levees separated by a distance of about nine miles and confining the river through most of its course across the plain.

We were invited to the office of the Commissioner (comparable to a State governor) who wished to discuss with us the philosophy of this flood control plan. He said, "As you can imagine, with levees so far apart, a situation made necessary by the large width taken up by the many channels of the Kosi, there are many local residents whose homes and fields are being included within the area confined between the levees. Do you think that this Government has incurred an obligation to these people to resettle them from their present location at government expense to some other land out-

side of the confines of the levees?" My immediate answer was in the affirmative. I argued that before the levees were built the people had lived on the land at considerable risk of damage by the river in flood, but once the levees were built their exposure to flood was assured.

I said I thought the obligation was of such a nature that the people ought to be moved even before the levee system was completed. "I fear you cannot appreciate the problem," he said. "Not only do we have no other lands to which these people can be moved, but also there are many people confined within the levees." How many, I asked. His answer was, "More than a quarter of a million."

In the United States the professionals concerned with water-development planning have grown accustomed to believe that there is no problem for which a technical solution cannot be found. This being the case, one can approach every planning problem in terms of finding an engineering solution that has the highest ratio of benefit to cost. The human or social aspects involved, that is the non-monetary aspects, are usually either turned into monetary values or mentioned in a few paragraphs and thenceforth disregarded.

Because most of our basic legislation governing the expenditure of Federal money does not explicitly define what is meant by a benefit and what is meant by a cost, it has been necessary to evolve through actual experience ways of evaluating benefits that lend themselves to a final computation of a benefit-cost ratio. There is a philosophic assumption underlying such practice, that the indirect or the non-monetary benefits and costs, though important, are unusable in making the final determination of whether a development scheme is or is not justified.

There has grown up, therefore, the practice of computing by different means price-tags that purport to measure the value even of those gains and losses

that do not lend themselves well to this type of description. Seldom are we faced with social costs on such a massive scale as the Kosi example. Such costs or gains are generally either too obscure or too far removed in time to be determining factors in whether a given development plan is to be considered or discarded.

IN THE EARLY DAYS of water development in the United States the possible alternatives in any development were relatively wide. The demand for water relative to its availability was not so great that competition was very intense. There were available alternative dam sites and alternative land suitable for development. The total encroachment of water-development works was not yet severe. With time the alternatives have become fewer. The best projects have already been built and the economic as well as the social justification is far less clear than it has been in previous decades.

It was then that the dragon's teeth were sown. It was the promotion of water projects that led to the introduction of the benefit-cost economics in public affairs. Benefit-cost ratios are not traditional in other aspects of public works. None considered it necessary to so evaluate schools, roads, post offices, police, and other facilities and services. These things are argued in terms of the satisfaction they yield to the public—not what they return only in the way of dollars. We have reaped the dragon's teeth by extension of benefit-cost economics into esthetics.

There developed, simultaneously, a concept of multiple-use based on the idea that where two uses could be served by a development rather than one, the resource would be more efficiently utilized and more benefits could be obtained for each unit of cost. This concept was reinforced by the practical-engineer truism that the unit cost of a large project is

lower than the unit cost of a small one. Multi-purpose use, therefore, became not only a supporting argument but tended to be looked upon as the measure of efficiency of resource utilization.

The concept of multiple-use can be handled at the planning level only by the involvement of a variety of disciplines because specialists in each type of use are required in the planning and in the process of evaluation. This interdisciplinary approach has forced the managers of esthetic and non-monetary social values to place a dollar cost on these values. Interdisciplinary water-development plans are transmitted for comment to all interested agencies. Disagreement with any aspect of a proposed development is then usually handled within the bureaus involved, and the final product is often advertised as a joint plan involving many, if not all, of the concerned government agencies. In reality, such a joint plan does not necessarily indicate what the several bureaus concerned would actually recommend individually. The portions dealing with scenic and non-economic resources usually represent merely a proposal concerning how best to accept or live with the proposed engineering works.

Such cooperative planning requires that evaluations of all aspects be set forth in terms that would be mutually compatible. In practical terms this means that various interests are expressed in monetary terms or they would in fact have no appreciable impact on the proposed program.

For example, it became necessary to evaluate the benefits and costs to fish and wildlife in the same terms that are used to describe the benefits and costs of flood control or of irrigation. The difficult technical problem posed is an assessment of how a given development would adversely or beneficially affect not only the hunting possibilities for migratory waterfowl but also the breeding and resting habitats of non-migratory and therefore immovable species. It may necessitate an evaluation of the difference in worth between trout and bluegills, or between salmon and non-salmon. The results of these evaluations are known to all. The benefit to fish and wildlife is expressed in terms of the tonnage of fish taken, or the commercial value of the visitor day. The esthetic value of having trout in a reach of river,

whether or not it adds tonnage to the creel, becomes a non-monetary cost. And because it is non-monetary, it is essentially discarded.

The net result was that a value was placed on an individual duck in terms of its worth in a game bag. Interestingly, a mallard by this process became worth \$2.00, and a goose worth \$6.00. The more difficult problem of evaluating other kinds of recreation that do not have a take or bag was relegated to the formula of the visitor day.

Clearly, there is an economic value to the society from the expenditure of time and money by individuals engaged in recreation. The recreationist spends money for gasoline, food, lodging, boat rental, camera equipment, skis, and the like. Though it is desirable to recognize the economic worth of the activities of the recreationist, there is practical as well as philosophic cause for alarm at the implication that the value of recreation lies in the expenditure for equipment rather than on the quality of the recreational experience.

The evaluation of recreation in terms of the visitor day is the assertion that two recreationists are twice as valuable as one, and therefore, a hundred recreationists are a hundred times more valuable. Social values deny this type of reasoning.

IT IS GENERALLY SUPPOSED that a development plan is necessarily better if it is multi-purpose and comprehensive than if it is single-purpose and of local application. Multi-purpose planning means in practice that individual portions of a development scheme need not necessarily satisfy the requirements that the individual benefits exceed the individual costs. The whole may be justified as long as the complex of development yields a new monetary benefit exceeding the net cost.

Costs and benefits in this context mean economic and therefore tangible benefits and costs. The comprehensive plan tends to incorporate even a wider variety of affected uses than individual multi-purpose projects, for when a whole region is encompassed in a comprehensive plan then a still wider diversity of people and situations is encompassed than would be in a single multi-purpose project.

The fact that such a variety of aspects may in reality introduce competition rather than symbiosis has not tarnished the value of the word comprehensive. The comprehensive plan can be potentially even more erosive to the esthetic and non-monetary values than a single multi-purpose project, owing to its much larger effect on the landscape and environment.

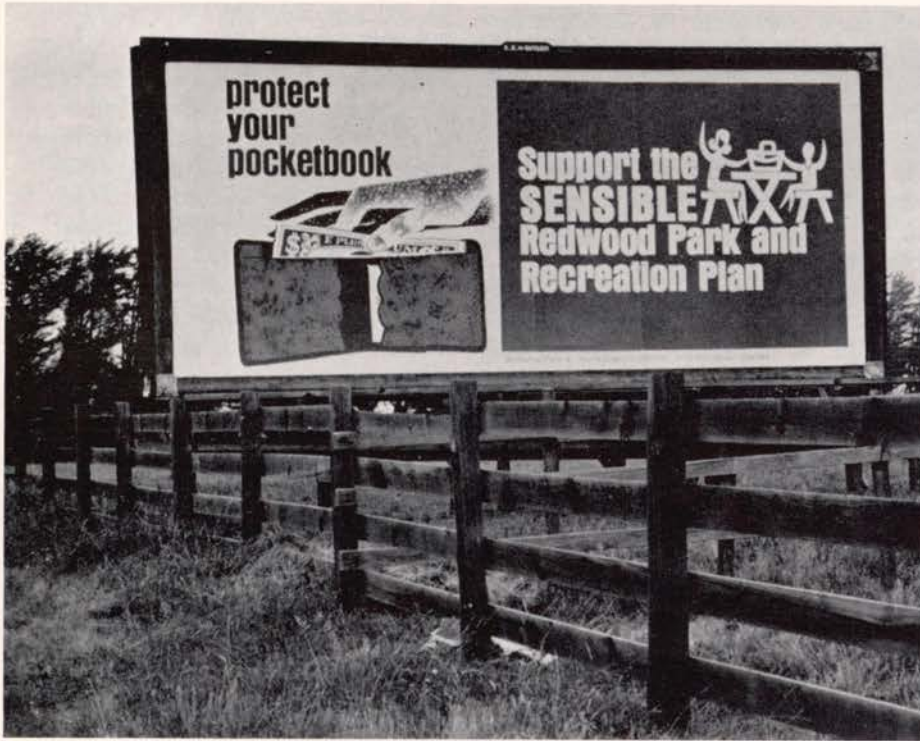
What the long-term effect is on society, for good or bad, of a comprehensive resource plan is difficult to judge because the social benefits and social costs are more dispersed than where a quarter of a million people are enclosed between levees.

There is another danger in the present scheme of monetary evaluation. The benefit-cost type of reasoning carries with it the implicit assertion that society is best served by developing not merely within the present generation, but immediately, all of the resources the monetary benefits of which can be demonstrated to exceed the costs. One may ask what is the cost of the resultant reduction in flexibility of choice left for future generations. Yet the concept of a comprehensive river basin plan is supposed to be our assurance that such a social cost is not significant.

Our knowledge of science outpaces the development of ethical principles. The newer the knowledge, the greener the ethics. Only recently have we learned that bigness is the way to economic efficiency. We have come to believe that bigness in the market place is not only compatible with but necessary for quality. Long highways are better than side roads. Big universities offer better graduate schools than country colleges.

Markets attest to the merit of the economies of scale. The same idea is behind multi-purpose and multi-basin water plans. They began only yesterday, so to speak, at first combining only irrigation and power, as at Hoover Dam, and then becoming basinwide, and now we are soon to consider a scheme that stretches from Alaska to Mexico and puts New York and California on the same pipeline.

These proposals will be argued chiefly in the benefit-cost framework. But the speed with which we improve our econometrics and our construction methods outruns the enlargement of our ethical attitude toward landscape. In the proc-



This billboard, just north of Fort Bragg, California, displays the message of the Redwood Park and Recreation Committee, with headquarters in Eureka. The committee apparently feels that the value of sensibility, like the value of a giant redwood, can always be measured best by dollars and cents. Photograph by David Brower

ess, bigness can subvert quality. Assigning dollar values to irrigation and power is one matter, assuming that all recreation can be measured in similar terms is another.

The emphasis on least cost as it is presently interpreted does not provide society with an adequate choice. Society may well choose, if given an opportunity, a development scheme that is higher in immediate dollar cost than an alternative, but that would preserve some natural asset.

LET US EXAMINE in more detail the nature of the gain in efficiency in multi-purpose over single-purpose structures. The advantage to be gained by combining in a single dam for example, the primary purposes of flood control and irrigation, comes primarily from the fact that per unit of reservoir volume the cost is lower for a large dam than for a small one. This may not be the understanding gained by the public, who probably thinks that the same storage capacity can be used for each of the two purposes. For irrigation or municipal use the storage must be utilized during times of high flow and depleted during times of low

flow. For flood control, on the other hand, storage must be depleted at all times in order that when a high flow occurs it can be utilized. So a reservoir for water supply should be kept as full as possible and one for flood control as empty as possible. The same storage volume cannot be used simultaneously for both purposes at the same time.

A given amount of water discharge through a penstock develops more power under a high head than under a low one. Therefore, from the standpoint of power production the more depth in a reservoir the better. Also, one of the advantages of hydroelectric power production is that by merely opening or closing the penstocks the rate of power generation can be adjusted rapidly to meet variations in demand. For this reason hydro-power is considered to be especially efficient for peaking purposes.

In contrast to all these uses, reservoir operation for recreation is most efficient when the water level is kept as steady as possible, with minimum fluctuation. It can be seen, therefore, that in principle, preferences for various reservoir uses are completely in conflict.

What is truly meant by the recreational use of a reservoir built for water

supply, flood control, or power generation is that during the time a body of water exists it can sustain fish, or float a boat. Any more sophisticated value of the water for recreation is made subservient to the alternative engineering purposes.

To summarize, then, a so-called multi-purpose reservoir does not mean that the storage can be used for more than one purpose, except collaterally or by chance. Multi-purpose development merely means that the cost of each unit of storage decreases as the height of the dam increases.

Exactly the same kinds of conflict appear, in principle, in other kinds of multi-purpose use. Selective logging may, by opening up the stand, increase the forage production for grazing. Weighed against this is the ever-present possibility that in certain ecological types, an incursion of brush or other less desirable species may negate hope for improvement in total forage capacity. Whereas the expansion of agriculture materially improved game-bird and animal production in certain ecological types over that which had existed in the virgin state, this increased productivity generally resulted from the increase in the linear extent of edges between two vegetative types in juxtaposition. Thus it cannot be said always that either logging or grazing will necessarily improve the production of game-birds and animals.

The relation between logging, grazing, and recreation is somewhat less clear because the criteria governing recreational uses are less clear than those measuring the productivity of lumber, wool, or beef. The only thing that is obvious is that for wilderness recreation any regular utilization is detrimental. There is a big enough problem in learning how to manage wilderness lands in order to keep the biota stable, but a clear distinction should be drawn between the management of lands for long-term stability and the regular utilization of that land for economic production.

In my opinion, then, multiple-use has become a shibboleth tending to obscure the actual benefits to society, because losses and gains to society are both economic and non-monetary. Presumably, before any alternative philosophy can be given serious consideration it is vitally necessary that a larger segment of the public recognize the difference between the true economies to be obtained by

multi-purpose development and the unreality that has grown in the public mind that multi-purpose development is a good thing per se. In present planning procedures, non-development is not considered as a real alternative. Immediate development is considered the only valid aim, and one to be recommended as soon as it can be shown that monetary benefit exceeds cost.

I AM CONVINCED that the non-monetary and esthetic values of the landscape can never be preserved if their economic significance is pitted against that of engineering works. It seems necessary to divide resource planning into two steps.

In the first stage, there should be presented to the public in equal detail the alternative schemes by which the stated objectives could be achieved. The public deserves to be informed of the various ways development might be approached.

They should be offered for consideration and discussion more than merely what some planner considers to be the "best scheme," and more than what some economist computes to be the "least cost" plan. When given the alternatives, the public increasingly is known to prefer some plan other than that carrying the lowest dollar price tag.

The first stage should illuminate those esthetic and non-monetary values in landscape or in resources that should not be called upon to face a test of monetary significance. Those of greatest social value would, through a process analogous to zoning, be set aside for preservation and non-development.

The second stage would be to weigh in a far more sophisticated manner than is now practiced, the hard-boiled economic realities of all those resources not marked for preservation, in order that the most efficient engineering and technological design for their development

be achieved. For the second stage the present simple comparison of so-called benefits and costs should be up-dated and elaborated to a level that would utilize economic knowledge and theory already extant, and that would make the economic design somewhere near the level of sophistication that characterizes the engineering technology.

I believe there exists a social value in maintaining and enhancing the quality of landscape. There is an esthetic uplift to be gained in a deeper concern for the world in which we have to live. But in our path is a dragon that regenerates itself every time it suffers attack. The dragon of misconception concerning the planning process is ever enlarging its radius of use. We must arm ourselves with the moral conviction that the cost to society of present procedures is too large, and that we must attack the dragon on its own ground before there is nothing more left for us to protect. ■

The Economic Aspects of Conservation

By John B. Condliffe

John B. Condliffe is Senior Economist, Industrial and Development Economics, Stanford Research Institute, Menlo Park, California. He has held chairs of economics at Canterbury University College in New Zealand, the University of Michigan, Yale University, and the University of California in Berkeley, and he has taught and done research at several other universities here and abroad. He is the author of The Commerce of Nations, which in 1950 was awarded the Wendell Wilkie Prize by the American Political Science Association. Mr. Condliffe joined the Institute staff in 1961 and assumed his present position this year.

FOR SOME MONTHS NOW, under the gentle but persistent prodding of Mrs. Wayburn, I have been pursuing a refresher course on the literature of wilderness. This has been a pleasant but frustrating experience. There are no adjectives that have not already been used in eloquent praise of wilderness and what it means to man. I have enjoyed

taking John Muir off the shelf again. I agree, as we all do, with almost everything that has been said so eloquently and so passionately at these conferences by so many nature lovers. I read the *Sierra Club Bulletin* faithfully and I write to my Congressman—who tells me that he couldn't agree with me more. Harold Gilliam's articles are a joy to me. But I get the impression that no one disagrees with us in principle. Everyone loves the wilderness—even those who are busy destroying it.

The very success of the conservation cause contributes to its difficulties. My wife and I have ten grandchildren. All of them are ardent trout fishermen, skiers and would-be climbers. Lest you think I am boasting, let me remind you that on his 83rd birthday last summer, Joel Hildebrand led eighteen of his tribe to a mountain-top in the Sierra. Whenever we send out those lovely Sierra Club books—as Christmas or birthday gifts or just to pay a special debt of gratitude—we recruit more wilderness lovers.

So the demand for wilderness grows. And if I may lapse into economic language, this demand is inelastic. Those who have once seen the eloquent light are forever haunted by it.

We are just at the beginning of this inelastic demand. There will be more people, many more, especially in California. More of them will want to escape to the wilderness and will have the means to do so. Later, I shall try to pick up Catherine Bauer Wurster's argument that the center of our problem is in the cities, not on the mountain tops. But first I want to register the fact that in the face of this exponential demand, doubling and redoubling in size and intensity from generation to generation, we cannot afford to restrict the supply of wilderness. Alas, we cannot add to it. The supply is not just inelastic. It is fixed. No matter how high you raise the price of admission to the national parks, you can't increase the supply. So it is imperative that, whatever arguments are thrust upon us, we fight tenaciously

to save every scrap of wilderness left to us—every stand of redwoods, every yard of foreshore, every marsh and mud-flat around San Francisco Bay. Once gone, it is gone forever.

Linnie Marsh Wolfe quoted a phrase from John Muir's autobiographical fragments that has intrigued me since I first read it. He described the laissez-faire beliefs of his day as "the gobble-gobble school of economics." I have not yet been able to track down these autobiographical fragments, but I think I know now where they are, if they still exist. They should be rescued and used as the basis for analysis of what is really the heart of our problem. Not having seen them, I do not know whether it was John Muir or Mrs. Wolfe who pinned the "gobble-gobble" doctrine on to Adam Smith, who did not in fact endorse competition as the law of the universe. He would not have endorsed a great deal of the wanton destruction that his authority was later invoked to justify.

I have said that this is the heart of our problem because it is essentially an economic problem—the choice of the best use to be made of scarce resources. Another great economist, Alfred Marshall, has emphasized the fact, too often forgotten by idealists, that social reform depends on being able to enlist not only the highest, but the strongest, motives of human behavior. We can be eloquent about the beauty of nature and the healing power of solitude. But if we are to preserve the wilderness against encroachments, we must also be prepared to show that these encroachments are destructive not only of beauty but of economic values.

Later I shall comment on some of the peculiar calculations that enter into so-called highway economics—the benefit-cost calculations, as Dr. Luna Leopold called them. I hope to convince you that we ought not to be intimidated by them. But I do not want anyone to think I am picking on the engineers. Mrs. Wayburn gave me 25 minutes and warned me that it was the absolute limit. So if I am not to be cut off in mid-sentence before I have done justice to the highway engineers, I must content myself with saying that, in my judgment, you ought not to concede the economic argument to the developers. Indeed it might be worthwhile to employ a competent economic analyst to study these questions from the conservation point of view. It would also

be worthwhile to study the tax system that is taking so much good agricultural land out of cultivation and threatens to destroy the California wine industry. Indeed, I believe the conservation movement ought to use economists at least as much as the developers and engineers do. The founder of an earlier conservationist movement—the Salvation Army—was once reproached for using a ribald drinking tune to which Gospel words had been set. General Booth's reply to his critic was that there was no reason to let the devil have all the good tunes.

Too often we think of this problem only in terms of remote areas to which we can escape from the congested and unnatural conditions of our great cities. But this is all one problem. There are now four million people living around the Bay. The Conservation Study Commission that has just reported to the California State Legislature estimates that in the year 2020 there may be not four but fourteen million people living around San Francisco Bay. What will this mean in terms of housing, of streets and highways, factories and shopping centers, theaters and galleries, automobiles and trucks, airspace and landing fields, parks and beaches, schools and playing fields, foul air and polluted water? Unless we begin very soon to bring some over-riding authority to bear on the clutter of village governments and regional boards that govern the Bay Area, it is not difficult to imagine the vast extension of ticky-tacky suburban developments across the hilltops, if there are any hilltops left, and over the water until the Bay is reduced to a dirty drainage channel with bridges crossing in every direction. The idea of forming these bridges into inter-connected traffic junctions will certainly commend itself to our highway engineers. They may even try to put a concrete roof over what is left of the Bay and make a landing field out of it.

One of the keys to this situation is control of the watersheds in the Bay Area. These are under the control of the local water districts. The men who control these boards pride themselves on keeping down the price of water, which is very cheap in the Bay Area. There is real danger that in order to keep down the price they may sell off bits and pieces of these watershed areas. In fact they are already doing so. There is a stretch of open country around the San Pablo

Dam just beyond the East Bay's Tilden Park that is being nibbled at right now. If we are not careful, we may wake up some day to find that we have lost not only the salt water in the Bay, but the fresh-water catchment areas all around it.

Can anyone believe that we shall be able to keep the coastline and the Sierra from being sacrificed to the developers if we do not preserve these open spaces and begin now to set aside recreation centers in the urban areas and the surrounding suburban and ex-urban communities? To do this will involve much more than our present tinkering with city-planning on a fragmentary and piecemeal basis.

MY ARGUMENT THIS MORNING is not new. When Alfred Marshall published the first edition of his *Principles of Economics* in 1890, he summed up his views on production costs by arguing that increased population and increased production generally brought improved living standards and greater social welfare. He had only one qualification (to take care of the Malthusian risk)—welfare would be increased provided an adequate supply of raw produce could be obtained without great difficulty. But in his second edition published a year later, in 1891, and maintained through all subsequent editions, he added a second qualification: that there must be "no such overcrowding as causes physical and moral vigour to be impaired by the want of fresh air and light and of healthy and joyous recreation for the young."

Marshall recognized that the range of economic analysis would extend beyond those facts that can be measured objectively in money. As more information becomes available and analytical techniques improve, economists make efforts to measure the imponderables of social choice that Marshall recognized but felt had not yet become measurable. There is a growing literature of welfare theory, still more easily applied to money than to esthetic values, but beginning to be extended experimentally to such imponderables as we are concerned with. It seems quite certain that there will be rapid advances in the analysis of social choices and their relation to individual values. There is no doubt in my mind that this will lead to greater acceptance of the necessity to preserve social amen-

ities even at the cost of some expansion of the public sector of the economy and some curtailment of individual economic freedom. This is not new. We don't allow individuals or industries to run sewage into our collective water supply. Why should we allow them to wreck our remaining open spaces?

Here in the United States, and in all the advanced industrial countries, the Malthusian problem has been overtaken by the progress of applied science. Our problem is not food and material shortages but surpluses. Indeed a good argument could be made that the national economy would be improved and the gross national product increased if we could eliminate or greatly reduce the burden of maintaining agricultural prices at their present levels. This would force the abandonment of much uneconomic production and accelerate the reduction of the agricultural population which has been going on for several decades. And we should all benefit both from lower food prices and from lower taxes. From the conservationist's viewpoint, we could prevent much erosion of range lands if we also took the tariff off wool and allowed beef to be imported without quota limits. The same argument could be made for removing the quotas and excise taxes that hinder the imports of minerals and petroleum. Incidentally, this would be a greater help to the underdeveloped countries than the billions of dollars of economic aid that we tax ourselves to provide. As taxpayers and as consumers, we should all be better off. The gain to the economy as a whole would be far greater than the losses that would be sustained by domestic producers. Indeed it would pay the United States to buy out the interests of these producers and turn the land on which they operate into national parks. You may think this is just the old free-trade argument that is said to be politically impractical. And so it is. But whether such a policy could be implemented or not, we should be clear that there is no economic case for preserving these industries at the expense of the national economy. The profit to an individual from such a protected industry ought not to be confused with its social benefits. The nation is poorer because we keep these uneconomic industries going at the expense of the taxpayer and the consumer.

Essentially the same argument can be made concerning the economic cost of

providing the necessary facilities for recreation and health, including the preservation of wilderness. When the highway engineers or the port engineers brush aside pleas for the preservation of irreplaceable natural beauty their calculations are too narrow on three counts.

In the first place they confine their calculations to specific items of construction rather than the whole system. Secondly, they consider only the material costs. And, even more important, their time horizon is too short—they do not think far enough into the future.

I DO NOT PRETEND to be an expert on engineering economics, but I have looked through the report of a Highway Workshop Conference published by no less august a body than the National Research Council of the National Academy of Sciences. What I found there intrigued me.¹

All the papers and discussions were on highway economics. Quite early I came across some surprising statements. There was, for example, the classification (by an eminent public servant) of the factors to be considered in analyzing a proposed highway facility. They fell into five categories.

The first was consumption or conservation of physical goods and natural resources. This doesn't mean what you or I might think it might mean. The main items considered here were motor vehicle running costs and goods consumed because of accidents.

The second category was the use of time by individuals. Both these categories were said to be easily convertible into dollar values.

Next came the effects of a highway on the values of adjoining property, goods, and services—mainly land values.

The fourth category consisted of the mental and physical condition of the traveler. These were said to be intangible and without any evidence as to their monetary worth. Nevertheless, they were estimated and estimated quite highly.

Not so with the final group of factors that bore the title "Other factors, pref-

erably not included in the solution." Let me read the list—"social life, environment, political organization, esthetics, recreation, pleasures, scenic view and other intangibles."

These factors, we are told, "are best considered as extra-market consequences, outside the economic analysis and given such weight as may be just and right in each case, by those officials who have final responsibility for approval of improvement projects."

This statement is worth considering in some detail. Notice first that final responsibility for decisions is allotted to officials. We in California know what this means. Who are these officials? Are they the appointed Highway Engineers? What right have they to decide what weight ought to be given to our social life, environment, political organization, esthetics, recreation, pleasures, scenic view and other intangibles? Or are they the politicians we elect? I'm in favor of the politicians. With them at least we have a chance. When an old friend of mine was first appointed Minister of Transport in New Zealand, he received in succession two deputations on the subject of gasoline taxes. The first was from the County Councils who wanted money for roads. The second was from the Automobile Association. He was naive enough to tell the second deputation that he couldn't make up his mind on this economic question because he wasn't sure which side had the most votes. It's up to us to see that our politicians do not doubt that we have the most votes.

I was interested not only in what the engineers leave out of their calculations, but in what they put in. Let me quote one example that was spelled out in detail. In the engineer's own words, "the improved highway may reduce motor vehicle running cost by one cent per vehicle-mile. As an added factor, if half a cent per mile is allowed for comfort and convenience, the benefits are thus increased by 50 percent. Similarly, if \$1.50 an hour is taken as the value of time as compared to \$1.00 an hour, the benefits of time saved are increased 50 percent."

In the example given, the benefits of the new road are calculated as consisting 84.4 percent in the value of time saved, and 11.5 percent in the value attributed to comfort and convenience. The remaining 4.1 percent is the saving

¹ Highway Research Board, Special Report 56, "Economic Analysis in Highway Programming, Location and Design," Workshop Conference Proceedings, September 17-18, 1959, National Academy of Sciences—National Research Council, Publication 775.

on automobile wear and tear. I find these estimates staggering, even in a hypothetical example, but what really is significant is the statement that "most any quantitative answer can be obtained if one desires to manipulate these factors within their minimum and maximum values." This surprising confession is illustrated by numerical examples following which the engineers are warned that "too often the critical factors of time, personal comfort, interest rate and period of analysis are chosen without serious consideration of their effect on the final answer." I don't know any economist who would tell his colleagues that if they wanted their calculations to come out right, they must be careful to choose the right numbers.

IT SEEMS CLEAR TO ME that we do not have to believe what the engineers tell us about highway construction costs and benefits. The fact is that they can calculate the cost of the concrete and the saving on automobile wear and tear. They cannot calculate the far more important cost of destroying the wilderness and therefore they ignore it.

Actually in the scarcity situation with a fixed supply of wilderness and inelastic demand for it, the value approximates to infinity. There is no way to price a painting by an old master except by the desire of collectors to own it. If we put in a proper value on the cost of destroying wilderness, no social benefit would justify building a freeway through the redwoods. What benefits does a freeway bring? The cost of the concrete is far more than the saving on automobile wear and tear, so those who promote the freeway are driven to justify it by telling us how valuable the time is that we save by traveling faster. This is over 84 percent of the benefit. For good measure, they throw in 11 percent as the value of the comfort and convenience (and I presume the peace of mind) we get from traveling faster on the freeways. So in fact the destruction of the redwoods is justified primarily by the time saved in driving through them.

I am not against freeways. I use them all the time. But I don't feel I have to accept these engineering calculations of their costs and benefits, and so I don't believe the argument that for economic reasons the freeways must go where the engineers find it easiest to lay the con-

crete. Nor do I feel ready to allow them to value what the scenery is worth to me and to you. I'm afraid that if they have their way unchecked there won't be any scenery. In any case we go so fast along the freeways that it is as much as your life is worth to take your eyes off the road ahead. As John Steinbeck says, you can travel all across America and never see it.

It is an encouraging fact that the great business corporations are beginning to take much broader views. In the location of their industrial plants, in their architecture, including the landscaping, and in the provision of access and space, they are taking into account the needs not only of the enterprise as a whole but of the community it serves and of the future. They are cost-conscious, but they do not make the mistake of choosing pinch-penny solutions to minimize immediate costs of a particular operation at the expense of everybody else. And they have learned that it pays in the long run to provide both their workers and their customers with agreeable surroundings and easy access to their homes. There are some corporations that take care to provide or assist in the provision of adequate and convenient outdoor recreation facilities for their staffs. Not all corporations are so far-sighted. There are some who would not hesitate to destroy bits of the wilderness; but the trend now runs the other way.

It might be expected that public servants who are appointed to serve the interests not of particular groups, but of the whole community, would be even more concerned with the social costs and benefits of their construction activities. But in fact much damage is being done to the wilderness by those we employ to serve the public interest. That they do not pay more attention to overall planning based on adequate research, to the non-material costs of their operations, and to their long-range effects requires some explanation. In large part, I suspect, the explanation lies in the political processes through which they must work. The public servant is always under investigation and audit, and dare not risk bold and imaginative decisions that can be criticized as extravagant and impractical. He is always under pressure for results, and at the lowest cost. The sources of state and local body funds are derived from direct taxes that bear harshly on particular groups of property owners.

There are always political pressures for immediate action.

IT IS NOT MY INTENTION to suggest that our public servants are inefficient or insensitive to community needs. It is not the individuals but the system that can be criticized when comparisons are drawn with private industry. But it is my intention to suggest that in the fight to preserve what is left of the wilderness, we should not be intimidated by the narrow cost considerations and inflated appreciation of time-saving with which we are so often confronted. If account is taken of the long-run social costs and benefits to the community as a whole, the economics of the argument are on our side, not on the side of highway engineers or those who would fill up San Francisco Bay. If we accept the narrow view, we ignore the price that future generations will have to pay in health and mental strain, in traffic congestion and accidents, in the ever-increasing costs of pulling down city freeways that should never have been built where they are, and in all the enormous costs of delay and frustration. We may not be able to put a dollar value on the cost of depriving those who come after us of the priceless heritage that has been ours, but I for one do not want my grandchildren and their children to lose that heritage because in our generation we took such a narrow, materialistic, and short-sighted view that we could not appraise the wilderness at its true value. ■

The above remarks by Mr. Leopold and Mr. Condliffe, as we have noted, were made originally at the Ninth Biennial Wilderness Conference. They will be included in the Sierra Club's 1966 publication of the entire conference proceedings. This volume will be the fifth in a series entitled "The Wilderness Idea." The first four volumes, now in print, contain the principal contributions to the eight wilderness conferences held in alternate years from 1949 to 1963. The four available volumes are: *Wildlands in Our Civilization* (Fifth conference with highlights of the first four); *The Meaning of Wilderness to Science* (Sixth conference); *Wilderness: America's Living Heritage* (Seventh conference); *Tomorrow's Wilderness* (Eighth conference). \$5.75 each. Special price for set of four in one order to a single address, \$19.95.

The Battle for Indiana Dunes National Lakeshore

MIDWESTERNERS, particularly Sierra Club members and other conservationists in Northern Illinois and Northern Indiana, recently were cheered by the Senate passage of S. 360, the long-pending bill to create the Indiana Dunes National Lakeshore. This is the second time the Senate has passed this Administration-recommended legislation to preserve the remaining unspoiled portions of Lake Michigan's magnificent Indiana Dunes and adjacent natural areas. In the concluding days of the last Congress, the Senate passed a bill almost identical to S. 360, but so few days remained in the session that House action was impossible. The bill died with the adjournment of Congress.

The expected speedy action on the bill in the Senate this year failed to materialize. A slowdown in the Senate came when a steel company whose undeveloped property would be included in the National Lakeshore but which had previously not opposed the park waged a vigorous campaign to stop the bill. Additional delay was said to be the result of some confusion about the attitude of the new state administration in Indiana, despite the fact that the previous administration of the same party had strongly endorsed the bill passed by the Senate last year.

Slowdowns on the park bill were not exactly news to the Save the Dunes Council, an organization of conserva-

tionists scattered throughout the country whose leadership is mainly centered in Northern Indiana. The Council has been fighting to rescue a portion of the dunes since the early 1950's. Nor was the slowdown news to Senator Paul H. Douglas of Illinois, who with this year's Senate approval of S. 360 marked the beginning of his eighth year of fighting to preserve the dunes in a national park. The Save the Dunes Council, Senator Douglas and other Senate sponsors of the bill, and such conservation groups as the Sierra Club painstakingly renewed their efforts to convince other Senators, public officials, and business leaders of the urgent need for this national park and of the widespread support for it.

Since the first bill to establish an Indiana Dunes National Lakeshore was introduced in Congress, the going has always been difficult, and at times many people thought the effort was no longer worthwhile. Early plans to save the central area of the best unspoiled dunes were stymied by congressional refusal to act on the lakeshore bill. Meanwhile, industrial forces consolidated their ownership of the area and proceeded to level the dunes for factories. A central issue to the establishment of the national lakeshore was the wish of state political and industrial interests to develop a federal harbor near a drainage channel known as Burns Ditch in the midst of the dunes. Proponents of the Dunes Lakeshore vigorously argued that the proposed Burns Ditch Harbor would do great damage to an irreplaceable area of natural beauty and, furthermore, that there was miserably small economic justification, in any case, for another harbor along the dunes. While the lakeshore proponents were able to hold up the harbor, two steel companies proceeded to establish rolling mills and to mine sand from the dunes, thereby destroying a large portion of the sought-after central region of the proposed Lakeshore area.

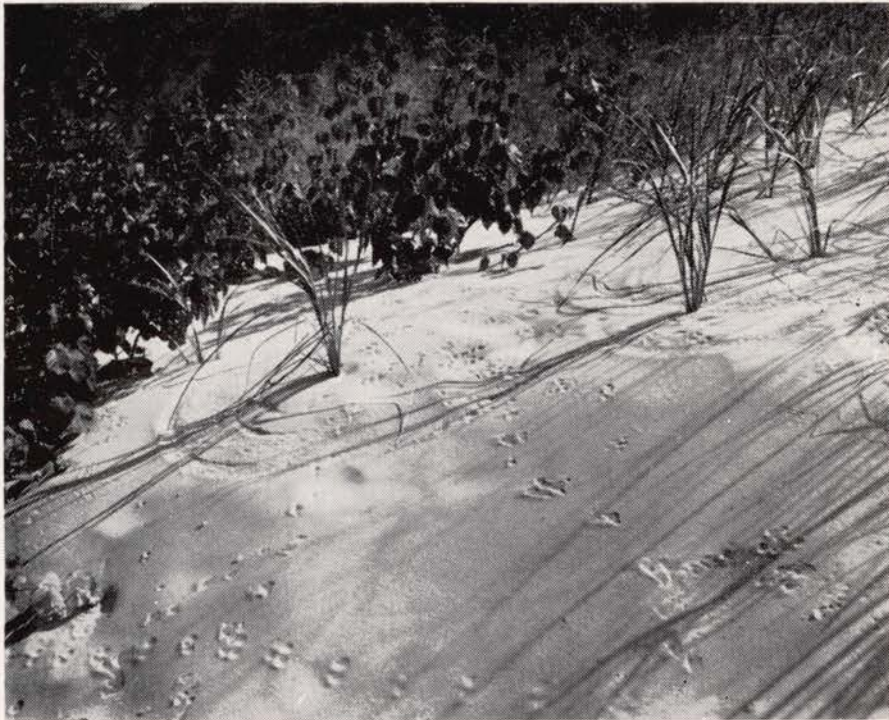


Sand, sun, water, and woods come together in the Indiana Dunes to make the proposed lakeshore a truly unique place of natural beauty.

In the fall of 1962, President Kennedy was brought into the battle. He had already designated the Indiana Dunes as a site for a needed national lakeshore, but he had not recommended specific boundaries or a resolution of the harbor-industry-park conflict. He did, however, at the personal request of Senator Douglas, order a thorough Bureau of the Budget study of the economic feasibility of the proposed harbor and of the entire fate of the dunes. In the fall of 1963, the White House recommended a compromise plan in which an Indiana Dunes National Lakeshore became part of the President's program and a Burns Ditch Harbor was to be built with federal funds, provided certain economic justifications for the harbor and pollution control protection for the area were established. Proponents of the lakeshore, however, had to give up any hope for including in the park that central area of the dunes that had been leveled by the steel companies.

Nearly all of the park proponents and harbor advocates agreed to the compromise plan. And the new Senator from Indiana, Birch Bayh, made the task of carrying out the compromise one of his priorities. Major efforts were also needed from the White House, from Indiana's other Senator, Vance Hartke, and from Senator Douglas. Senate approval of the lakeshore bill in June was expected to be followed soon by Senate approval of the harbor authorization, but with a specific provision denying funds for the harbor until the park is authorized.

THE BILL TO CREATE the national lakeshore, now before the House Committee on Interior and Insular Affairs, is virtually identical to the bill proposed in the 1963 compromise plan, although additional portions of the proposed park have had to be given up in the intervening months. It would establish an 11,292 acre national lakeshore along the southern shoreline of Lake Michigan with five wetlands units in the interior. The lakeshore would have approximately ten miles of shoreline, including the three miles of shoreline in the Indiana Dunes State Park. The bill provides that the 2,000 acre state park would not become a part of the national lakeshore except with the agreement of the State of Indiana. Since Indiana acquires much of its state conservation revenue from this



One can find in the Indiana Dunes both the grand rhythms and the small delicate patterns of nature. Photograph by courtesy of the Chesterton (Indiana) Tribune

state park, it seems most likely that cooperative management and development of the two parks would continue.

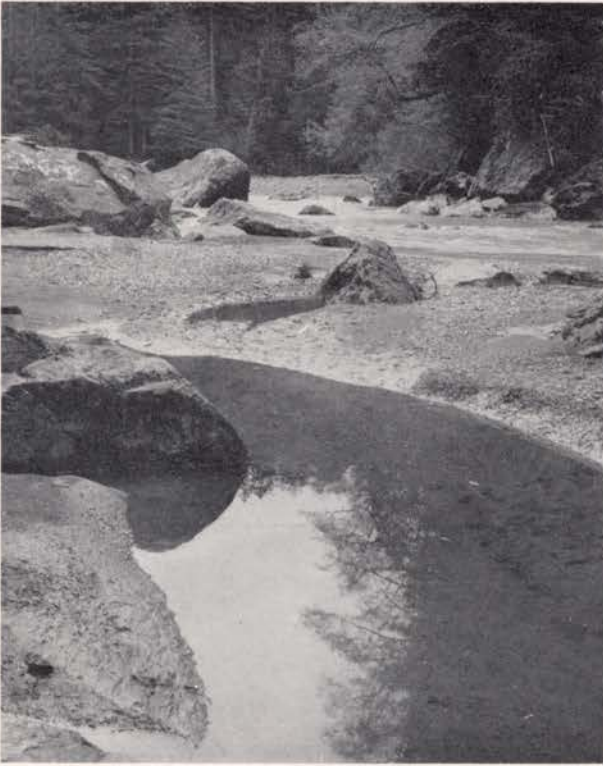
A principal purpose of the national lakeshore is to permit the preservation of the magnificent dunes that have remained unspoiled in the state park by providing areas in the national park for intensive visitor use, especially for swimming and camping. The most important site for mass bathing facilities is in the western section of the lakeshore, which adjoins the city of Gary, Indiana. Most of this section is owned by a steel company that continues to object to the inclusion of its property in the Lakeshore even though it is wholly vacant. The company has no announced plans for developing this area, which sponsors of the bill feel is crucial to the lakeshore.

Nearly ten million people live within 100 miles of the proposed Lakeshore. This fact, combined with the unique and unspoiled beauty of the dunes, make the lakeshore region irreplaceable. This lakeshore proposal, more than any other park proposal now before the Congress, meets the Rockefeller Commission plea for more parks where the people are, especially in shoreline areas.

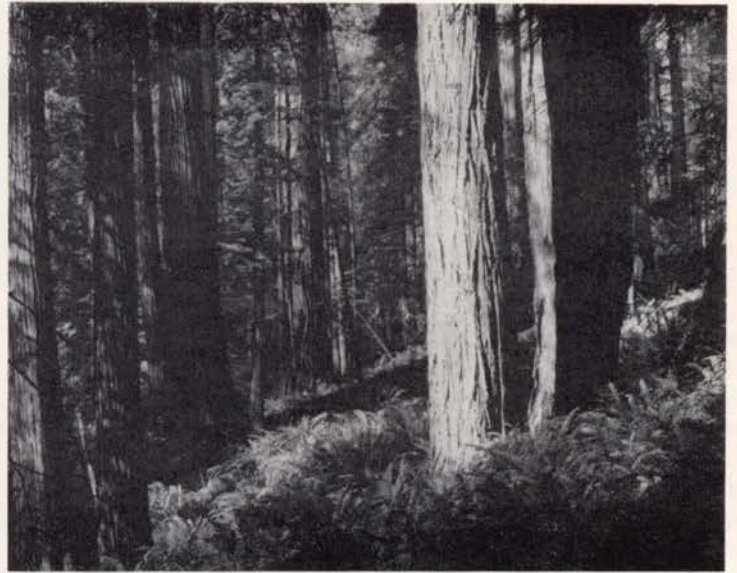
In the words of the Senate Committee on Interior and Insular Affairs: "The remaining Indiana Dunes region is an

unusual complex of exceptional sand dunes, numerous marshes, swamps and bogs, a greatly diversified flora and fauna, and an attractive white sand beach. The sand dunes rise to heights of 200 feet in a series of ridges and valleys, simulating miniature mountain ranges. Because there are over 1,000 different flowering plants and ferns found in the dunes, a meeting ground for northern and southern species, botanists and biologists consider the Indiana Dunes area to be an outstanding scientific laboratory." And, the Committee report continued, "Nowhere on the Great Lakes are water, waterfront, and hinterland more favorably combined for recreational use of millions."

The next hurdle in the path of S. 360 is House hearings. These must be scheduled by late summer if any opportunity at all is to remain for enactment of the lakeshore bill this year. Another problem is that the Burns Waterway Harbor authorization may be cleared in the Omnibus Public Works bill, thereby bypassing the condition that the lakeshore be established first. Many observers feel that prior authorization of the harbor would doom the lakeshore. The battle is tough and each step perilous, but the flame, in this case, is truly worth the candle. ■



Pool beside Redwood Creek



Scenes in the Proposed Redwood National Park

*Headlands at the northern end of Gold Bluffs Beach
in the National Park Service's proposed park Plan I*



The photograph to the left shows a slope stand of redwoods in the drainage of Lost Man Creek within the Park Service's Plan I. On the right is a scene of Redwood Creek.

**Photographs by
Philip Hyde**



The views shown here are samples of the features that could meld together to make an unmatched Redwood National Park: flats of record height redwoods; fine, open slope stands; virgin forests walling streams and sometimes reflecting in side pools; a rugged seacoast

stretching southward into long beaches; elk browsing in sunny open areas. With the exception of the elk, the features are all outside of existing state parks. Whether the features survive depends on whether the American people act fast enough to establish a national park there.

Elk, autumn rutting season, Prairie Creek Redwoods State Park

Bottom flat along Redwood Creek at upper end of Plan I of the NPS



The Kern River Watershed: Three Propositions

By Laurance I. Moss

This article was originally presented in June as a talk at the Second Annual Conservation Workshop of the Kern Plateau Association in Kernville, California. Mr. Moss is a nuclear engineer at Atomics International and is also president of the Kern Valley Development Company, which develops and improves property for recreational use in the Lake Isabella area on the Kern River. He has been a club member since 1959.

I WOULD LIKE TO DISCUSS with you today three propositions. The first proposition is that there is substantial evidence of watershed damage and erosion in the Kern River basin, and the weight of this evidence indicates that the cause of the erosion is the logging operations being conducted in the area. The second proposition is that despite the recommendations of a Congressional Committee report on the subject, the U. S. Forest Service has failed to make a serious attempt to measure the relationship between logging and erosion, and has given no indication that it intends to correct that failure. The third proposition is that the people of this region, as well as the more than one million visitors to the area each year, cannot afford to let the U.S.F.S. have its way simply because it is following a time-honored practice in selling trees to finance the development and management of the national forest, because the hidden costs involved in that operation completely dwarf the meager income that is derived from such sales; our country must find another way, a more rational way, a way consistent with the concern for a more beautiful America that President Johnson has so eloquently expressed.

I will not dwell at length on the evidence of erosion; I will simply list a few of the pertinent observations:

- There are repeated examples of mud- and sand-filled streams flowing from logged watersheds joining clean, clear streams from undisturbed watersheds. The contrast is

so obvious that no further comment need be made.

- The small lake behind the Edison Company dam just north of Fairview is rapidly filling with sand and silt. In what was formerly a deep portion of the lake, just behind the dam, sufficient sand has been deposited so that it rises above the surface of the water.
- Large quantities of sand have been deposited on the banks of the Kern River, as well as numerous other streams. Sand has covered the gravel beds in several areas, thereby destroying the spawning-grounds of the fish.
- At the inlet to Lake Isabella, large quantities of sand have been deposited. It has been necessary to keep heavy equipment working for months each year to keep the intake of the Edison Company canal open at this point.

There has been general recognition by all parties that serious erosion problems could arise as a result of logging in this region. For example, the "Timber Management Plan, Cannell Meadows Working Circle," which is the planning document written, approved, and published by the Forest Service to set the management policy for the region, states (on p. 69) that:

"Most of the soils within the timber zone are of granite origin. Soils formed from this parent material are characteristically a sandy loam. In general this soil is quite unstable when the vegetative cover is removed."

Another document that warns of possible erosion damage is "A Report on the Kern Plateau, Sequoia National Forest, California," written by Robert E. Wolf. This report was prepared in 1959 at the direction of Senator James E. Murray, Chairman, Committee on Interior and Insular Affairs, U. S. Senate. The report states (on p. 10):

"... the decomposed granitic soil

base is highly subject to wind and water erosion. There is no doubt that logging will create some erosion problems where none existed before. Their intensity will be determined by the volume of timber cut, the terrain to be logged and the methods used.

"The Kern Plateau provides a substantial amount of the water for Isabella Reservoir. In order to assure the high quality of this water caution is indicated in actions that will create soil disturbance."

The Wolf Report continues as follows:

"Inasmuch as this is a heretofore undeveloped area and because of the importance of this watershed it would be highly desirable to establish a series of water measurement devices at key locations in watersheds so that data on erosion and its effect upon water would be subject to precise measurement. Logging intensities and methods would thus be guided by the effect upon the watershed. Initial sales should not only provide for complete watershed evaluation but be light in intensity and relatively small. In that way adverse effects will not be continued because a large, long-term contract must be completed."

It is now nine years after the initial sale (the Salmon Creek sale), six years after the Forest Service's Timber Management Plan, six years after the Wolf Report. It is time to examine the record of the Forest Service in this matter. It is time to determine if they have been safeguarding the public interest with which they are entrusted.

What is that record? Probably the most recent statement of it was made on June 10, 1965 before the Committee on Natural Resources of the California State Senate, by an Assistant Regional Forester who represented the Forest Service on that occasion. He was there to testify in opposition to Senate Resolution 203, which requested that a com-

prehensive study be made of the natural resources of the area. With respect to water measurement devices, the Forster stated that a total of three sedimentation dams had been constructed (in 1960-61) for the entire area. These were installed adjacent to Salmon Creek. He further stated that these dams were undergoing a period of calibration, to determine the extent of erosion from natural causes. When the period of calibration was ended (perhaps this year), then logging would be permitted on a controlled basis above one or more of these dams, and the increased erosion, if any, would be measured. The first measurements might be available in two years. Until that time, there will be no measurements of the effect of logging on erosion damage.

In other words, at this late date, after eight years of logging in the Cannell Meadows Working Circle on the Kern Plateau, after the strong warnings and recommendations of the Wolf Report, *the Forest Service has not made a single measurement of the relationship between logging and erosion damage*. To say that their position is untenable is an understatement.

I will tell you what the representatives of the Forest Service will probably reply to this charge. They will say that a long period of calibration of sediment dams, followed by a long period of measurements made after logging is done above the dams, is necessary in order to study the effect of variations in precipitation on the erosion. This does not happen to be true, as I will discuss shortly. But even if it were true, would it be proper for the Forest Service to permit a vigorous program of logging to take place, year after year, in the absence of measurements of the effect of the logging on water quality, in clear defiance of the Wolf Report?

LET US NOW DISCUSS the kind of measurement program that would be required. First, if I may digress for a moment, I wish to point out that I believe that I am competent to discuss this because I am an engineer and have been responsible for the direction of many technical programs, some of them involving expenditures of the order of several millions of dollars. I have lived with the problems of designing experiments to investigate various cause-and-effect rela-

tionships. In all cases, the most desirable approach in conducting such a study is to make measurements of the effect for the case with the suspected cause present and to compare these to measurements made with the suspected cause absent, while keeping all other suspected causes unchanged. This is referred to as a "controlled experiment."

Now it is not always possible to keep all other suspected causes unchanged. In particular, in the study of erosion damage due to logging, the natural variation in conditions (primarily in precipitation) from year to year would introduce a complication. One way of minimizing the effect of this complication is the way that the Forest Service has apparently chosen. That is to conduct measurements for a long period, say five years, during which time the influence of the natural variations on erosion can be studied. This would be followed by a logging operation in the watershed above the sediment dam and then another long period of measurement, in which time the effect of the natural variations in a logged watershed would be examined. In this approach, the location of the watershed and of the dam are of course the same, but the natural conditions vary somewhat from year to year. This method is scientifically sound, but it does suffer the disadvantage of taking a great deal of time (about ten years total).

A second method is equally valid. That would consist of placing sediment dams on several similar watersheds. Some would be logged watersheds; others would be left undisturbed. The comparison between the two could then be made at the same time, with the same climatic conditions. There would of course be some variation due to the natural difference between one watershed and another, but this is probably less significant to erosion than the variation in climatic conditions from year to year. On a scientific basis, then, the second method has much to recommend it in preference to the first method. On the basis of expediting the measurements, the second method is clearly the preferable one, since the results will begin to be available immediately.

For either method it is important to construct a large enough number of sediment dams for the measurements to have statistical significance. The present number of three is inadequate for the pur-

pose. Probably a number in the range of ten to twenty would be sufficient; this could be determined by a careful study of the range of variations that have been observed in other measurement programs of this type.

It should be noted that the cost of such a comprehensive measurement program is insignificant in comparison with the potential economic consequences of erosion. The first cost is measured in tens of thousands of dollars. The second cost is measured in tens of millions of dollars. Clearly a comprehensive measurement program is the cheapest kind of insurance.

In summary, the Forest Service has permitted logging in the area for eight years, during which time no measurements of the effect of logging on erosion have been made. They have constructed an insufficient number of sediment dams to make these measurements. They have chosen a method that requires on the order of ten years for a comparison between logged and undisturbed watersheds to be made, in preference to a method by which the comparison would begin to be made almost immediately. Clearly their position is not defensible.

THE PRACTICES of the Forest Service are not consistent with the Multiple Use concept in this National Forest. As was stated in the Wolf Report, which strongly reaffirmed the Multiple Use concept for this area:

"In the case of the Kern Plateau, then, the rate of progress possible for the most important long-term resource usages should determine the level at which the other complimentary and subsidiary uses go forward. Recreation and water should be considered as the major of the multiple uses for the Kern Plateau."

And later, in his summary, Wolf writes:

"The location of the Kern Plateau of the Sequoia-Inyo National Forests in relation to natural routes of transportation from California's population centers indicates that recreational development will be the highest use for this forested area.

"The conservation of the water resources of the Kern Plateau would of course be well assured by preserving the natural conditions. To protect this valuable water source,

the uses made by man of the Plateau should proceed on a slow basis expanding only as evidence shows that these uses do not materially affect water flow or quality. Water measuring devices should be installed to determine what effect use activities have upon water quantity and quality."

This is wise advice. Recreational use and water conservation are primary; other uses are secondary. Great care must be taken to insure that a secondary use does not threaten a primary use.

It is time to insist that the Forest Service follow this advice.

But, reply the proponents of continued logging, how can recreational development be financed if the trees are not sold? I believe that we are living in an age when the answer to that question can be found. To say that an answer cannot be found, in a country as rich as ours, is to admit poverty of thought. Promising beginnings have already been made, on a national basis; the establishment of user's fees is one example.

In any event, it does not make economic sense to jeopardize the rapidly developing recreational industry in the watershed. The income from the sale of trees is a few hundred thousand dollars a year. The present income from recrea-

tional use is probably of the order of ten million dollars a year. It is growing explosively. In 1964, according to figures published by the California Chamber of Commerce, there were 1.3 million visitor-days of use. It appears that in 1965 this record will be far surpassed. Preliminary estimates (published in the *Kern Valley Sun*, June 3, 1965) are that there were 150,000 visitors on the Memorial Day weekend alone. If one doubts that recreational use depends on water quality and quantity, one need only look at the record of the first years of the 1960's, when the water level in Lake Isabella was allowed to drop to a very small pool. The number of visitor-days in those years was well under half that of the average of the preceding years.

Of course, the Forest Service does not receive any of this recreational income, whereas they do receive the income from the sale of trees. That is the root of our problem; it is why we must apply a bit of imagination to solve it. Above all, we must not insist that the Forest Service make a profit in its operations. It is not a commercial enterprise. If there are stockholders, they are the public; it is more important that Forest Service practices be in the public interest than that they be a commercial success.

On the basis of the above considera-

tions, these recommendations are made:

- That by executive order the issuing of new logging contracts on the Kern Plateau (the Cannell Meadows Working Circle) be suspended, until such time as the results of comprehensive studies of the effect of logging on erosion are made available;
- That this study include measurements from a greatly increased number of sedimentation dams, on both logged and undisturbed watersheds;
- That those who are concerned with this problem be given an opportunity to work with the Forest Service in specifying the conditions of this study, and that they be given periodic reports of its progress;
- That all of us approach this problem in the spirit of the words of President Johnson:

"A few years ago we were greatly concerned about the Ugly American. Today we must act to prevent an Ugly America.

"For once the battle is lost, once our natural splendor is destroyed, it can never be recaptured. And once man can no longer walk with beauty or wonder at nature, his spirit will wither and his sustenance be wasted." ■

More Freeway Reform Needed

Though the recent session of the California legislature did pass six measures to provide greater control over freeway location, a bill to prohibit condemnation of parkland for freeways did not pass. Approved by an overwhelming margin in the lower chamber, the bill (A.B. 1442) was not considered by the Senate.

The impending fate of Jedediah Smith Redwoods State Park in northernmost California clearly indicates why legislation to further reform the freeway planning process continues to be needed. In 1963 the Highway Commission voted to route a freeway through the National Tribute Grove in the northern end of the park, although construction was not anticipated until 1973. Then money was suddenly placed in the highway budget to allow purchase of rights-of-way as of July 1. And the actual construction is planned to start next summer. Some

speed-up of the freeway building program in Northern California might have been expected because of the need to replace route 199 damaged by last winter's floods. But it seemed likely that such construction would have been accelerated first nearer the Oregon border.

The State Park Commission has now asked that land acquisition for the freeway be deferred. The Commission had not previously expressed its views on the route's location. However, following a presentation for the Sierra Club by Robert Jaspersen and Peggy Wayburn at the June meeting of the Commission, it recommended that the question of routing be studied by a special committee that the Governor appointed last year. The committee, designed to mediate disputes between the Division of Beaches and Parks and the Division of Highways, is composed of two members of the Park

Commission and two members of the Highway Commission.

Following the concurrence in this recommendation of the Director of the Department of Parks and Recreation, the Highway Commission has agreed to having the question studied by the committee. It has also agreed to postpone purchasing rights-of-way until August 1.

FREEZE-DRIED DEHYDRATED and CONCENTRATED FOODS

for your use whenever light weight and quality are necessary. In addition to our current line, we are preparing several new items that will incorporate more freeze-dried products. Write us for a price list or come in and see us.

KEN'S LIGHT PACK
1205 Laurel Street, San Carlos
P. O. Box 283, San Carlos, California 94070



Mt. Elliott, from Milford Track. Photo by courtesy of New Zealand Government Travel Commissioner, San Francisco

The 1966 Trip to New Zealand

Just about six months from now, a group of Sierra Club members will board a chartered plane for a month-long trip to New Zealand. At Honolulu, Fiji, and Tahiti, where the plane will stop en route, a single schedule is planned for all trip members. Once in New Zealand, however, the trip will split up into three separate groups, each one to explore New Zealand in its own way.

Group A, limited to 60 persons, will have the easier and more luxurious trip, moving by bus from camp site to camp site. In the plan for this group is a four-day hike along the Milford Track, one of New Zealand's famous hiking trails. Food and sleeping facilities in huts will be provided along the track. Emphasis throughout the trip will be placed on hiking, boating, fishing, nature study, and photography. There will also be opportunities for extended side trips, knapsacking ventures, and climbing. Layovers are scheduled for some cities.

Group B, limited to 40 persons, will have a more strenuous trip, one that will appeal to the climber and hiker willing to carry his own equipment, food, and cooking gear. The destination of this group will be the high mountains with their possi-

bilities for rock, ice, and snow climbing, and their more arduous knapsack routes.

Group C will consist of members who merely want to join the flight in order to get to New Zealand. The group will be entirely on its own until the return flight of the charter plane.

Estimated costs, including air charter, are as follows:

Group A \$1000 Group B \$850 Group C \$600

Since space on the trip is limited to the aircraft used, it is important that reservations be made as soon as possible. A deposit of \$100 per person, payable when you register with the club office, holds your place on the trip. On September 20, 1965, an additional deposit of \$400 per person is payable to meet our charter plane contract requirements. The balance of the trip fee is due December 29, 1965.

If you cancel your reservation before September 20, your full reservation fee of \$100 per person will be refunded. After September 20, no refund will be made unless your place can be filled, in which case a full refund will be made.

For a more detailed prospectus of the trip, write to Al Schmitz, Sierra Club, 1050 Mills Tower, San Francisco 94104.

The BLM Meets Its Critics

By Michael McCloskey

ANY DIRECTOR of the Bureau of Land Management who attempts to apply modern management techniques to his agency and make the national interest the standard for that agency's work is bound to be in trouble. In setting these goals for his agency, it was predictable that a new director of the BLM, Charles H. Stoddard, would soon be in trouble. The trouble comes from ranching, logging, and other commodity industries that assert vested interests in the public domain and stand to benefit from lax administration.

It began early in 1965 with hearings throughout the West on regulations to implement the Classification and Multiple Use Act of 1964. This act, passed by Congress last fall, loosened the long-standing deadlock on the future of 180,000,000 acres of public domain land in 11 western states. The loosening was accomplished by giving the Secretary of the Interior the authority to classify for retention in public ownership certain kinds of consolidated public holdings. By explicitly providing this authority, Congress reversed the bent of previous legislation, which looked forward to the eventual disposition of all the public domain. For the first time, Congress also clearly sanctioned the management of these lands for purposes other than grazing or logging. The act specifically states that outdoor recreation, wilderness, wildlife, watershed protection, and other public values should also be considered in management. In conjunction with the new act, Congress provided that widely scattered small holdings and holdings around urban areas should be disposed of to private parties and to state and local governments. This new act will stay in effect until 1969, the year when the Public Land Law Review Commission is to submit its plan for modernizing all public land laws.

At the western hearings on the regulations, grazing interests objected strenuously to the Bureau's determination to make sense out of the authority given to it by the new act. The National Cattle-

men's Association felt that the regulations went "beyond the intent of Congress," prejudged the findings of the Public Land Law Review Commission, and implied "retention of all the lands in federal ownership." They argued that responsibility for outdoor recreation ought to be turned over to state and local government, and they objected to the designation by the BLM of any public domain lands for wilderness use.

As the hearings in the grazing areas concluded, lumbermen in Oregon found a pretext for continuing the barrage of criticism. The pretext involved a purported exchange of 2,000 acres of public domain timberlands in southwestern Oregon for private land needed for the Point Reyes National Seashore in California. An association representing lumber companies that own little timberland themselves and buy most of their stumpage from the federal government raised the issue. It persuaded the governor of Oregon to open his campaign for Maurine Neuberger's Senate seat with a charge that the BLM was scheming to carve California parks out of Oregon's timberlands—its "green gold." It was hinted that a far-reaching scandal was concealed in a "give-away" of Oregon lands. A disagreement between BLM's national director and its state director over interpretation of the new classification act indirectly aided the critics. Portland newspaper columnists siding with those critics reported the disagreement in a sensational way to stir public suspicion that something was awry.

THE ONLY THING that was awry were the charges. Conversations about the possible exchange had just begun, and were, for the most part, between the National Park Service and a private party. The conversations had been started because federal law required it. The Point Reyes Act directed the Park Service to try to arrange exchanges of surplus Interior Department lands in states adjacent to California for the private sea-

shore lands it was directed to acquire. Following the guidelines set forth in the new act, Director Stoddard decided that the Oregon lands in question might be subject to disposal. These holdings were small, scattered tracts that could not be practically managed on a permanent basis. When a qualified applicant expressed interest in a possible exchange, the agencies had to respond. Charges that the federal government was going to be "short-changed by a million dollars" were baseless. The law requires an exact matching of fair market values and provides exhaustive appraisal procedures. As only the second step of the ten steps necessary in such exchanges had been completed, the appraisal process had not yet reached the stage of matching acreages by value. And because the conversations were only preliminary, no public notice had been given. The private party's interest in an exchange, however, was common knowledge in the southwestern Oregon county where the public land was located. Thus there was no substance to the charge that the transaction was being kept secret. The procedure had simply not reached the stage where any meaningful details were available on which to invite public comment.

The most persistent charge was that Oregon's sustained-yield forestry system was endangered by the possibility of unrestrained land exchanges with other states. The governor raised the prospect that new "seashores on Cape Cod, in Miami, and even Texas, could call upon Oregon timberlands for exchange purposes." The suggestion was that such exchanges would somehow ruin Oregon's timber economy. The facts were again to the contrary. First, less than three per cent of Oregon's public domain land had been tentatively listed as disposable, and most of this did not bear timber. Second, the exchange under discussion would reduce the BLM allowable cut in Oregon by less than one-half of one-tenth of one per cent. Third, putting timberland in private ownership does not necessarily remove it from timber

production, or even sustained-yield timber management—as most of the land-owning timber companies are usually quick to stress. Pursuing this point at a May 14 hearing in Portland, a spokesman for the Sierra Club pointed out that, “experience shows that there is every likelihood that successive sales will place this land in the hands of large timber holding concerns who also will manage it for sustained yield. A number of lumber companies in the immediate area have recognized this possibility in approving the exchange. Those who object are mainly connected with an industrial association representing companies who do not own much timber land and buy from BLM. The basis of their dissatisfaction can be inferred to stem from the likelihood that timber will be directed from their mills into other mills as a result of this exchange.”

The club's presentation at the hearing also emphasized the increasing value of exchanges in pursuing conservation goals. Speaking for the club, Assistant to the President Michael McCloskey said: “As the nation steadily produces far more than it can consume, it is finding that open space and fine areas for outdoor recreation are in short supply—not timber or cattle. But with a static land base, it is also finding that the prices on land for recreational purposes are rising at an alarming rate. It will be increasingly difficult to obtain the money to acquire these lands by purchase

alone. Other means of acquisition will become increasingly important—chief among which is the method of acquisition by ‘exchange.’ It makes good sense for the nation to trade land no longer needed to produce commodities for land needed for parks, especially near urban areas. Such trades get the nation the land it needs without costing the taxpayers more money and without removing more land from the taxrolls.”

McCloskey then responded to those who nurture provincial jealousies by charging that one state's lands are being traded away to help another: “The people of Oregon know that these are federal lands, not the lands of the State of Oregon. Only the boundaries of the United States are relevant in determining what is done with these lands. As a people, we are not about to Balkanize this nation by state, by county, or by timber management unit boundaries. We long ago learned in economics that all countries are more prosperous if they trade freely rather than hoard their goods behind their national boundaries. So also it is true that all parts of the nation prosper more if federal properties are managed on a flexible policy of free-exchangeability throughout the nation. We cannot run an accounting of the benefits of free-exchangeability on the basis of the politics of a single situation nor on the basis of the experience of a single year or two.” He concluded by stating that “the public's need for more

parks and recreation areas must not be sacrificed to give one industrial group an advantage over another. This is what the whole issue comes down to.”

Even though the BLM policies in Oregon were strongly defended, the metropolitan press in the state failed to report the bureau's side of the issue. Director Stoddard's official reply to the industry charges was not given any coverage at all, although it was placed in the *Congressional Record* by Senator Wayne Morse. The press also did not report that anyone came forth at the hearings to support the BLM (many did). And it incorrectly reported many facts.

Thus the BLM's director endured a particularly withering attack in Oregon. Paradoxically enough, his timber industry critics attacked him for doing the very thing that segments of the grazing industry were criticizing him for not doing fast enough—disposing of public domain lands. The criticism of both these groups have two characteristics in common: (1) a view that too much public domain might be administered with recreation in mind; and (2) a determination to make Charles Stoddard's stay as BLM director difficult.

Conservation and recreation groups are equally determined that these views shall not prevail. Possibly for the first time they are countering the weight of commodity interests to better enable the BLM to carry out the directives of Congress. ■

Pennington Glen Canyon Film Released

One of the most powerful of weapons against the Bureau of Reclamation's ill-advised proposals to dam Grand Canyon, and at the same time the finest of revelations of the meaning of an unspoiled Glen Canyon, a new sound-and-color half-hour 16mm film is now ready.

“Glen Canyon” is the title; the film is derived from a slide presentation with which Phil Pennington has been fascinating California audiences for more than a year. The motion-picture film has been produced by Larry Dawson Productions, of San Francisco. Mr. Dawson made two Glen Canyon trips himself, and has skillfully explored color slides with his motion picture camera, panning or zooming as the need dictated. An extraordinary flow and continuity result. The beauty of the canyon comes through; the un-

equalled river experience as well. We know of no one who ever explored Glen and its side canyons more thoroughly with a camera than Mr. Pennington. Other photographers represented include Ansel Adams, David Brower, Clyde Childress, David and Gudrun Gaskill, Sam Greene, Philip Hyde, Bruce Kilgore, Dan Lutten, Dick Norgaard, Eliot Porter, Terry Sumner, and Clyde Thomas.

Without saying so much about the film as to spoil it, we can reveal that it is extremely moving, that the Bureau of Reclamation will not like it, and that it may, in its sheer beauty and poignancy, save Grand Canyon. We hope that each chapter will assume responsibility for at least one copy and for seeing that as wide as possible an audience is exposed to it and encouraged to act. It was admitted by

the reclamationists, in the Dinosaur battle, that our most effective weapon was the Charles Eggert film, “Wilderness River Trail.” Through chapter help and that of sister organizations, 25 copies of that film were in constant use at the peak of the battle.

The cost of the original photography is a gift to the club, most generous on Phil Pennington's part. The cost of production has been donated. But we still need to recover the cost of making the half-hour-long color and sound prints—\$275 each, including treatment for long life, reel, can, and shipping case. Contributions are welcome. So is boldness—on the part of people who want to get copies now and put them to work, on faith that the cost can be recouped while the copies are shown and while the force grows that is needed to keep Grand Canyon from being dammed. —D.B.

Letters

A New Proposal for Dam Builders

Editors:

At long last our golden opportunity has come to stop the indiscriminate building of dams on every American river larger than a Los Angeles storm drain!

The President of the United States, in his recent proposal for economic development of Southeast Asia, has given us the perfect chance to transfer the formidable energies of the Bureau of Reclamation and the Corps of Engineers to a new location. It is a location where they can build more dams than they ever dreamed of, without destroying a single American national park or monument or wilderness area.

I refer, of course, to the scheme for flood control on the Mekong River. This ancient source of water rolls 2600 miles from its source to the sea, through an area populated by millions of people and covered by millions of acres of tillable land.

Just think how many dams could be built in 2600 miles! At the rate of one per 100 miles (a reasonable projection for such energetic planners as we have) this would be 26 dams. Of course, this figure would be supplemented by the occasional acts of sabotage committed by one side against the other, with a net effect, perhaps, of an additional 25 percent or six more dams.

With 32 dams to build, the number of planners and builders who could be shipped overseas and tied down for long periods of years staggers the imagination. And if we could arrange not to train any new dam builders while all of these worthy citizens are overseas, our problems could be solved permanently. By the time the builders returned home, they would be ready for retirement and nobody else would know how to do their work. . . .

So I say, let's support the President! Let's get behind him with unanimous support from all the conservationist groups. I will volunteer to organize a Coordinating Committee to Send Dam Builders Overseas.

Who knows? The Mekong Project may go down in history as America's greatest step forward in preserving its wilderness.

ALLEN JAMIESON
Palo Alto, California

Conservation, People and Special Interests

Editors:

Mr. David Pesonen's article, "Trees Don't Vote," in the April *Bulletin* was an outstanding analysis of the dangers inherent in efforts to void the Supreme Court's "one man-one vote" decision. The article amply demonstrated that the conservation of our

heritage of natural resources can only be protected when the state legislature represents people rather than special economic interests.

As a member of the House Judiciary Committee, which will soon hold hearings on the amendment, I shall work diligently to uphold the principle of "one man-one vote."

JAMES C. CORMAN
Member of Congress
22nd District, California

Support for the Population Policy

Editors:

May I applaud most heartily the statement regarding "Sierra Club Population Policy" (page 2, *Sierra Club Bulletin*, April, 1965). In the absence of a reasonable and successful human population policy, conservation is doomed before it begins. Although still largely unrecognized by the general public, the damage done already is very real.

Your foresight in reprinting Harold Gilliam's "Shattering the Wilderness Myths" is enthusiastically commended also. With one possible exception every point is well taken. While it is undeniably true that in general it is motivation rather than techniques that is the key to population control, there are some exceptions. Records show that there are thousands of poor women who do not have access to medical help who would greatly appreciate relief from the unending bearing of children. Provision for this group, so important in relation to the anti-poverty program as well as to conservation, should be made by the dissemination of birth control information. Judge William Dozier of Stockton put it this way (Report, Committee on Public Health, Hearing on Senate Concurrent Resolution No. 51, Relative to Family Planning, May 9, 1963):

"Do not forget that the middle class of educated citizens can and does use contraceptive devices if he or she chooses. It is the desperately poor, the ignorant, the constitutionally inadequate, the culturally deprived, the mother supported by welfare, who have neither the knowledge nor the means to use contraceptive devices. From these same persons, in these same families, are bred our criminals, our delinquents, our dependent children and our mental defectives."

WALTER P. TAYLOR
Prof. of Conservation Educ. emeritus
Claremont Graduate School
and University Center,
Claremont, California

**ATTENTION:
all mountain climbers**



the
bivouac



NEW!

a precision watch with built-in
Altimeter and Barometer that tells you
TIME / ALTITUDE / WEATHER

Here's a fine, precision time piece that's a must for every mountain climber. One quick glance at the BIVOQUAC tells your height instantly . . . takes the guesswork out of knowing your altitude! The BIVOQUAC is the world's first precision, dependable watch with built-in altimeter for telling height plus barometer for forecasting weather through barometric pressure changes. Made by the famous Favre-Leuba watch company of Geneva, Switzerland, the BIVOQUAC is an easy-to-read, super sensitive and extremely accurate instrument. Features 17 jewels . . . unbreakable crystal . . . shock-protected . . . radium tipped hands . . . stainless steel case with coordinated stainless band. One year warranty. A truly outstanding instrument, complete with band. . . . **\$155**
POSTPAID

FAVRE-LEUBA
GENEVE

Since 1737, from father to son,

eight generations of watchmakers.

DEALER INQUIRIES INVITED

10 DAY MONEY BACK GUARANTEE

SCOT AIR, INC Dept. SCB-665

6451 Main St. • Morton Grove, Ill. 60053

Please send _____ Bivouac watch(es) @ \$155

Enclosed is \$ _____

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

Sorry, no C.O.D.s (Ill. residents add 4% sales tax)

Help Needed on the Mount Everest Book

IN THE HIMALAYAN BOOK we are planning for this fall (*Everest: The West Ridge*) we want to add to the Exhibit Format Series one of the finest mountaineering books we can. The photographs are coming for the most part from the American Mount Everest Expedition through the good offices of Norman Dyhrenfurth, leader of the expedition. The main text is Dr. Thomas Hornbein's and dwells especially on the first traverse of the mountain ("West Side Story" is what he has called his lectures).

But here is where you come in—if you have been a reader of mountaineering literature. We are seeking excerpts from the literature, no matter what the mountain range being talked about, that have turned you on. Where was it, in what book, that you were reading along quietly, when suddenly the author did something with words that transported you, lifted you, launched you into orbit, lumped your throat, or in some way or other took you right out, way out, of the humdrum you may have been in. We are looking for such excerpts and are prepared to reward the successful searchers—a copy of the book, say, for each quotation used.

You can thus have a role in the third of the book's three parts:

1. *The Approach* has to do with man and his relationship to the land, to the people, and to the environment the American Expedition met as it started out, and returned.

2. *The Contest* tells the story of the climb, man versus rock and ice, man pitted against his own weaknesses and finding his own inner strength as the stress builds up. This is not a "nuts and bolts" story of a climb, but something deeper as the expedition nears and passes the summit.

3. *The Prospect* is the larger story of man and mountains from the time he learned to accept the challenge. The finest Himalayan photographs we could find are joined to moving excerpts from texts that reveal something of the survival value to man himself of the force within him that sends him off to summits.

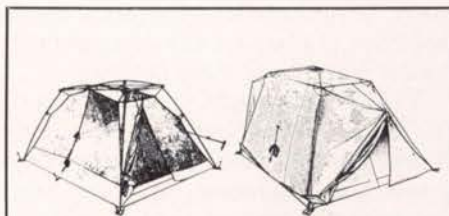
The length can vary. Look at the Glen Canyon book, for example, to see how widely we have varied—all the way from Justice Douglas' "There is music

for the ear in wilderness" to the full page (requiring finer print) of Loren Eiseley's tour de force about chemicals in the sky. The deadline in our words-to-be-turned-on-by contest is Monday, August 16. Please don't send in the "Because it's there" excerpt, either. We think that one has been pretty well worked over.

—D.B.

The 1966 Alps Hiking Trip

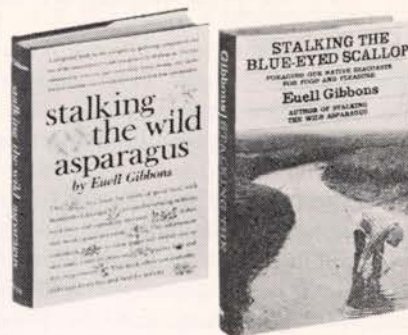
The 1966 Sierra Club hiking trip—via charter plane—to the Alps of Switzerland, Austria, and Italy is now half full. The six-week trip (starting the weekend of July 16, ending the week before Labor Day), will include two, three, or four weeks in the mountains, with the remainder of the time on your own. Reservations should be made as soon as possible. The round trip plane fare will probably be about \$450 from the West Coast, \$380 from the East Coast. A \$100 deposit per person will hold a place on the plane. Cancellation up to February 1, 1966, can be made with full refund. Thereafter, the full \$100 refund will be made only if the cancelled place can be filled.



THE NEW ULTIMATE TENT

No other tent is so waterproof, breathable, roomy, easy to erect, and light weight. The Bishop Ultimate Tent uses a newly designed Blanchard Draw-Tite frame, and is an improved version of the tents used on the American Everest Expedition. Waterproof fly; breathable tent; huge, protected window. 2, 4 and 6-man models. Fitted or flat fly. Frost Liner. Write for 16-page brochure.

BISHOP'S ULTIMATE OUTDOOR EQUIPMENT
6804 Millwood Road
Bethesda, Maryland 20034
Telephone: 301-652-0156



Now is the time to enjoy these famous "stalking" books by EUELL GIBBONS, who tells how to forage for wild foods and cook them to a gourmet's taste.

STALKING THE WILD ASPARAGUS



and

STALKING THE BLUE-EYED SCALLOP



Both by EUELL GIBBONS

"Euell Gibbons is one of America's most original writers about nature and food," says the *N. Y. Times*. With his two celebrated "stalking" books, he has introduced thousands of readers who love the outdoors to the pleasure and excitement of finding all kinds of wild food they had never even thought of.

Mr. Gibbons takes you with him as he goes foraging in fields, forests, and along the shore, pointing out the delicacies to look for, where to find them, how to gather them, how to prepare them, and how to cook them. His enthusiasm is catching. Long before you have finished reading either book you will be impatient to get out of doors and start foraging for yourself.

Both books are well illustrated with line drawings that make it easy to identify the many wild foods Mr. Gibbons tells about. His recipes are clear, simple, and easy to follow. Add a new dimension to your enjoyment of the outdoors. Get both books now and take them along on your vacation and weekend trips.

At all bookstores. Each \$6.50

DAVID McKAY COMPANY, INC.
750 Third Ave., New York, N. Y. 10017

A New Phase in the Cascades Campaign

WITH THE REPORT of the North Cascades Study Team expected some time in August, the campaign for a North Cascades National Park has taken a new turn.

The Forest Service in the Pacific Northwest has announced a plan for a 533,460-acre Eldorado Peaks Recreation Area in the disputed region between the Glacier Peak Wilderness Area and the North Cascades Primitive Area. Following the announcement, the Service launched a widespread publicity campaign in Washington state to promote public support for this plan as an alternative to a national park. The plan covers the region that conservation groups asked be largely classified as wilderness in the 1960 decision to establish the Glacier Peak Wilderness Area.

The North Cascades Conservation Council has protested the announcement as "precipitous and prejudicial." It says, "the announcement has circumvented the study team and is aimed at prejudicing the public in favor of a recreation area before the study team has a chance to make possible park recommendations." Forest Service Chief Edward Cliff has rejected the Council's protests.

Forest Service spokesmen now deny that the Service intended to formally establish a Recreation Area as such. Federal regulations require that such areas be established by Secretarial order, and no order has been issued. However, all steps short of an order have been taken: an area has been designated to be managed primarily for recreation with boundaries shown and acreage computed; a unified plan has been prepared for an area spanning several national forests; and a title for the area has been chosen. Obviously these steps go beyond stand-

ard management procedures, which the Forest Service says it is following.

The North Cascades Conservation Council has charged that this so-called plan is designed to pass for something that it is not: a permanent, important classification with official status. As such it misleads the public into believing that Forest Service administration might be a suitable alternative to National Park Service administration. Actually the plan has no permanency or legal status at all; it is subject to revision without notice by the Regional Forester. And, the North Cascades Conservation Council asserts, it is *ultra vires* (beyond its authority) in that it fails to comply with federal regulations governing establishment of such areas.

The Forest Service maintains that it has issued the plan merely to answer public requests for information. As the North Cross-State Highway pushes across Washington Pass, the Service says interest has mounted in its planning for the area. However, an officer of the Wenatchee National Forest admitted that a pre-arranged publicity campaign had been mapped out, with each national forest supervisor assigned a territory to cover. In presentations, glowing accounts are given of plans for new campgrounds, visitor centers, and other facilities.

Though some might think it appropriate to wait for the North Cascades Study Team to outline the appropriate places for such developments, the Forest Service evidently felt the public could not wait another few months. Rather than work through its members on the team, the Forest Service has acted unilaterally. Undoubtedly a tougher phase of the North Cascades campaign is beginning.

MICHAEL McCLOSKEY

FEDERATION OF WESTERN OUTDOOR CLUBS 34th ANNUAL CONVENTION

Sept. 4, 5, and 6 at the Santa Barbara Campus, University of California

Distinguished authorities will speak on national park status for the Channel Islands and the North Cascades, park preservation of the vanishing shoreline, motorized vehicles in trail country, wilderness classification procedure, and other issues.

Accommodations will be provided on campus. A room for two persons for two nights, and seven meals (lunch Saturday through lunch Monday) is \$19.25; a single room, \$21.25. The non-refundable registration fee is \$5 per adult.

Register now. Make checks payable to: Los Padres Chapter, Sierra Club. Members of outdoor groups please indicate affiliation and whether attending as delegates. For details, write Fred Eissler, Convention Chairman, c/o Sierra Club, 817 Via Campobello, Santa Barbara, California. Mail remittance to this address.

SWISS STEAK DINNER FOR TWO



(only 8 ounces
in your pack)

No refrigerator for miles. But you enjoy tender Armour swiss steaks with gravy, peas and mashed potatoes—a delicious 36-ounce meal for two people. A dinner that just minutes ago weighed only 8 ounces in your pack.

How's it possible? These are Armour Star Lite foods—the result of a new discovery called "freeze drying." Foods made this new way give you the flavor and goodness of fresh foods. And they keep for months without refrigeration.

Choose your outdoor meals from 10 different Armour Star Lite foods. All 10 taste like home cooked food. All 10 are perfect for outdoor eating because they're lightweight — and need no refrigeration. At good sports stores everywhere.

FREE BOOKLET: To get a free booklet describing Armour Star Lite foods and a list of dealers who carry them, send a postcard to Armour Star Lite Foods, Dept. SC, Box 4309, Chicago, Illinois 60680.



Star Lite Foods

Washington Office Report

By William Zimmerman, Jr.

AS OF JULY 1, Congress had passed and the President had approved only four bills of direct concern to conservationists: P.L.89-19 (S.90) to authorize the Nez Percé Historical Park in Idaho; P.L.89-33 to authorize the Agate Fossil Bed National Monument in Nebraska; P.L.89-39 (S.435) to extend the boundaries of the Kaniksu National Forest (to permit acquisition of the shores of Upper Priest Lake); P.L.89-54 (H.R. 3165) to establish the Pecos National Monument in New Mexico. This looks like a puny record, but against it must be set the 37 reports that the House Interior Committee has made on bills referred to it. Two of these bills, Tocks Island and Whiskeytown-Trinity-Shasta National Recreation Areas, under a suspension of the rules, were brought to the House floor last week and passed by that body.

Since July 4th the House Interior Committees seem to have become aware of other bills on which action should be taken. Of a sudden, hearings are scheduled on Oregon Dunes, Indiana Dunes, Sleeping Bear Dunes, and Guadalupe National Park. The chances of passage are about in the order listed. Guadalupe National Park legislation will not be enacted at this session because Senator Alan Bible, chairman of the Senate Subcommittee on Parks, has announced that he wishes to visit the area before his subcommittee acts. Sierra Club members in the area are strongly in favor of establishing a park.

Assateague Island National Seashore

Another bill that may be in trouble would establish Assateague Island National Seashore. As passed by the Senate, S.20 would permit the construction of a road the length of the island, thus invading the wildlife refuge at the southern or Virginia end. The road has been opposed by the Interior Department. But Secretary of the Interior Stewart Udall, when questioned about the road at Senate hearings on the proposed seashore, did not say he would oppose the bill if it provided for the road. Instead, he suggested that the bill require a study and report by the Interior Department. Some conservationists, on the contrary, have said that they would prefer no bill to the Senate bill. A possible compromise would permit a road across the southern tip of the island without seriously damaging the refuge.

Southwest Water and Power Plan

Although no final date has been set, it is expected that some time in August hearings will be held on the Southwest Water and Power Plan by the House Subcommittee on Irrigation, Walter Rogers, chairman. Following the hearings in Washington, other hearings will probably be held in Arizona and possibly in California. This is certainly one of the most controversial bills before the Congress. If Secretary Udall is determined to stake his political future on this legislation that will drown out much of the floor of the Grand Canyon, he may find himself opposed by most of the conservationists, regardless of their high regard for him personally.

Water Anti-Pollution Bill

A bill of national importance was passed by the Senate on January 29 and by the House on April 28, but it may not be enacted in this session since there was a major change made

by the House. Senator Edmund S. Muskie's water anti-pollution bill, sometimes ironically called the pollution bill, would require the Secretary of Health, Education, and Welfare to set up standards for the quality of water in each watershed in the United States. The House deleted this section, leaving the determination of water standards to the states. Naturally, the various representatives of industry appearing at the hearings opposed the Muskie provision; the burden of their argument was that industry, working with state officials familiar with local problems, could effectively and promptly eliminate pollution. Thus far there is no indication that either side is willing to surrender. Conservationists generally applaud Senator Muskie's insistence that standards be set by a national agency.

Tax Exemption Bills

I have not heretofore mentioned several bills, which have been before the Congress this year and in previous years, to change certain sections of the existing tax code. These sections now deny to donors the right to claim tax credit for gifts made to tax exempt organizations, a substantial part of whose activity involves lobbying. It is argued that the right to lobby is the same as the right to petition Congress. If a tax exempt organization limits its lobbying activities to those purposes for which it was itself granted tax exemption, then its donors should be allowed credit for their donations to the organization. Heretofore the Treasury Department has ignored requests from the Congress for a report on legislation of this type. This year the Ways and Means Committee of the House has again asked the Treasury for a report on a bill by Representative Henry S. Reuss. A similar bill has been introduced in the Senate by Senators Michael Mansfield and Philip A. Hart. Until a Treasury report has been received it is not likely that the Ways and Means Committee will consider the bill.

Administrative Matters

Secretary Freeman is standing firm on his decision to enlarge the reserved area in the Superior National Forest. The Department of Agriculture has just released a draft of new regulations to put his order into effect.

Disappointing, on the other hand, is the announcement by Secretary Udall that a "steering committee" has been appointed to make a detailed study that "could lead to establishment of a nationwide system of trails" as recommended by President Johnson. For several months Interior has been supposed to have been drafting legislation to carry out the President's recommendation, but the job must have been too tough, for now we are given another joint Agriculture-Interior Committee, composed of four fine men, to make suggestions so that the Secretary may make recommendations to the President "by the end of the year." Naturally, I am reminded of the President's request that Interior make a report to him by the end of last year on a Redwoods National Park. No one seems willing to talk about this request of the President's. It is common knowledge in Washington that the top officials of Interior and the Budget Bureau have met and are in substantial agreement as to the general plan, but meantime the redwoods are being cut down. ■

The Wild Cascades: Forgotten Parkland

By Harvey Manning

With lines from Theodore Roethke

Foreword by William O. Douglas

... I came upon the true ease of myself,
As if another man appeared out of the depths of my being,
And I stood outside myself,
Beyond becoming and perishing,
A something wholly other,
As if I swayed out on the wildest wave alive,
And yet was still.
And I rejoiced in being what I was. . . .

—THEODORE ROETHKE

The Northern Cascades of Washington belong to our national gallery of natural beauty. Such places are the last of our primeval landscapes, the few surviving samples of a natural world, to walk and rest in, to see, to listen to, to feel the mood of, to comprehend, to care about. There isn't much of it left. What there is is all all men will ever have, and all their children. It is only as safe as people, knowing about it, want it to be. But do enough people know about it, and about a conflict between those who want to use raw materials and those who want to preserve natural beauty? The Northern Cascades region is a great country, big country; but size alone can not protect it. Herein lies the reason for our book. It will be gratifying if it helps people understand and work in, or work with, what the club works for: *We shall seek a renewed stirring of love for the earth; we shall urge that what man is capable of doing to the earth is not always what he ought to do; and we shall plead that all Americans, here, now, determine that a wide, spacious, untrameled freedom shall remain in the midst of the American earth as living testimony that this generation, our own, had love for the next.*—DAVID BROWER.

Eleventh in the Exhibit Format Series
Available late July, 1965, \$20.
(\$17.50 until September 1.)

East of Cascade Pass by Ansel Adams

