



SIERRA CLUB
BULLETIN *January*
1951

Miscellany

Cover: Ski-touring country, near Sentinel Dome, The photograph is by the editor, who has used it in a move of desperation—good winter photographs are in short supply. As explained to the group of skiers assembled at Clair Tappaan Lodge two weeks ago, we need more photographers who are willing to forsake color now and then and run a bit of black-and-white film through their cameras. In the first place, color is beyond our means (about \$350 for a page of it); in the second place, good b&w reproductions are still very satisfactory, and are rarely to be made from color originals. Skier-photographers, take it from here!

Did you read the interesting and well written account of the first ascent of Jerupaja, in Peru, in the January 13, 1951 issue of the *Saturday Evening Post*? Well illustrated, too.

And the Matterhorn too? A cable railway to the summit of the Matterhorn is contemplated by a number of Italian business men, to the horror and dismay of all alpinists. The International Union of Alpine Associations has taken action to try to save the mountain from this fate, and also to prevent the carrying out of a similar Zermatt plan for a cable railway up the Hörnli. To make room on the summit for any number of passengers brought up that way, a concrete terrace and restaurant would have to

be constructed, or accommodations hewn out of the rock itself. Such a prospect, with visions of "cable-borne excursionists, eating a table d'hôte luncheon on the summit of the Matterhorn and buying souvenirs and postcards in the bar" is enough to make all climbers weep bitterly, and to make Whymper leap from his grave.

POWER SKIING ILLUSTRATED. By Tyler Micoleau. A. S. Barnes & Co. New York, 1949. Illustrated by the author. 96 pages. Price \$2.95.

A complete and highly descriptive coverage of the principles of the dynamic technique as taught in the American Ski School. Fully illustrated and precisely described maneuvers for the beginning to the advanced skier. A good book by an expert instructor to be read over and over again.

WHERE TO SKI: Ski Guide to the United States and Canada. By Joan and David Landman. Houghton Mifflin Co. Boston, 1949. \$3.00.

A catalogue to the ski resorts in the United States and Canada, with some historical notes on the development of these areas. Facilities, rates, seasons, locations and activities at all resorts are well covered. Elevations and mileage and transportation facilities to and from all resort areas also are given. Coverage of areas is as of 1949.

ROBIN I. WELCH.

THE SIERRA CLUB, founded in 1892, has devoted itself to the study and protection of national scenic resources, particularly those of the mountain regions of the Pacific Coast. Since these resources receive best protection from those who know them well, the club has long conducted educational activities, under the committees listed below, to make them known. Participation is invited in the program to enjoy and to preserve wilderness, wildlife, forests, and streams.

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Sierra Club Bulletin

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JANUARY, 1951

NUMBER 1

... TO EXPLORE, ENJOY, AND PROTECT THE NATURAL MOUNTAIN SCENE ...

For the January Record

A Challenge of 1951

We in the Sierra Club face a challenge this year—a challenge that confronts all those individuals and organizations that are devoted to preserving the natural scene in the national and regional parks and wilderness areas. The challenge is for us to speak effectively, not as voices *in* the wilderness but *for* the wilderness; for the preservation of the wilderness and park areas in the face of propositions that are bound to be advanced in the name of flood control and “mobilization of our national resources.”

In this time of emergency we all realize the possibility that we might have to draw upon land, forest, and mineral resources that are in areas dedicated to be left in their natural state, unexploited by man. Such a draft can be imagined only in case the very existence of the nation is at stake and these particular lands, these particular forests, these particular minerals are really essential to the national defense. Recognizing this possibility, remote as it seems, we can see at the same time, clearly and much more imminent, that such a drawing upon dedicated park and wilderness areas could be sought under the guise of national defense by those who would seek profit for a limited group or for themselves. Conservationists of the natural scene must ever be alert for such suspicious propositions. Raids on the nation's natural resources will, in all probability, not be announced as such.

Many of our members are in the Armed Forces and more will be. We all are aware

of the situation today. We believe that one of the elements of the life we are going to work for and fight for, if need be, is the opportunity to draw strength and inspiration from the mountains and meadows we love as God made them. May each member of each of the country's conservation organizations continue to give the support required to meet the challenge!

LEWIS F. CLARK, *President*

Mountain Enlistments Halted

A telegram from General Mark Clark, chief of the Army field forces, to officials in Camp Carson, Colo., has put a sudden halt to all enlistments into the 14th Regimental Combat Team by former veterans of the famed 10th Mountain Division.

Clark, in his announcement, stated that arrangements for ex-mountain troopers to join the Camp Carson unit have been suspended because of the Korean war situation which will probably change the status of the 14th RCT. The Army field commander said that military officials are not contemplating the formation of specialized mountain fighting forces at the present time, although a small mountain training unit will still be maintained at Camp Carson.

National Newspaper of Skiing, Jan. 15.

Humphreys Up

Not to be outdone by White Mountain Peak, across Owens Valley from it, Mount Humphreys has also added 14 feet to its stature, thanks to a recheck by the U.S.G.S. The new elevation is 13,986 feet.

Letters

Arlington, Washington, Dec. 28

EDITOR—I note with alarm that Nanda Devi (SCB, Nov. 50) has shrunk some 3,000 feet. I was keenly interested in these mountaineering notes and appreciate their inclusion.

JACK STURGEON

• As you may have noticed we didn't let that 3,000 feet get away. We simply added it to a peak in the following paragraph.

LAUD 1-5 REPRINT

San Francisco, January 12

EDITOR—My copies of the first five volumes of the SCB came last night.

Since I believe credit should be given where it is due, I hasten to write you that they are a splendid job. Having bought a bit of printing in my day, I know that photo-offset can be pretty gray and undistinguished on occasion. This isn't the case here at all; as a matter of fact, I should judge that in legibility and convenience of format, the second printing is better than the first must have been. And of course the *Bulletin* is always delightful reading. Congratulations!

ROBERT T. SMITH



Los Angeles, January 17

EDITOR—My set of the reprint edition . . . came today and I am delighted with it. Ever since I acquired all the volumes available in the late twenties I longed to have a complete set and now my ambition is realized! . . .

[It was] a rather thankless job, to be sure, but a mighty fine one to place those old *Bulletins* in the hands of mountain lovers.

MILTON M. HYMAN

• As the sets of SCB volumes 1-5 reach their destination various comments about them come our way. For these, our thanks. Word comes that one of our purchasers is not too happy about the way the photographs reproduced. We, too, wish they were better; but (a) the original photographs were hardly up to what we're getting accustomed to selecting from for the SCB these days, and (b) the originals, long since having been lost track of, could not be reproduced well in the early days; the lithographer therefore had nothing to copy but poor reproductions, some of which he improved upon.

We might have substituted new photographs, but thought it better to keep the record straight.

Ed.

ON CLEANING UP

San Francisco, January 16

EDITOR—I was very much interested in the story, "Clean-up Made Easy," quoted from the *Yodeler* in the *Sierra Club Bulletin* for December 1951. When I was on duty as a ranger in Sequoia National Park, it became my onerous duty in 1937 to fill in at the Ash Mountain checking station. We were having so much trouble with tourists scattering trash along the highways and at the same time were beginning to feel the pinch from reduced numbers of CCC boys for clean-up that we tried out the paper bag trash receptacle plan. The whole thing was more or less a ranger project. Paper bags were purchased out of fire fighting funds, as I recall, and we ran them through a mimeographing machine to carry the message to the traveling public, asking them to put their trash in a bag and drop it into the nearest receptacle at the end of their trip.

We at the checking station thought that it worked quite well, but we were unable to convince the Chief Ranger that it had enough value to carry on a continued program. Consequently it was dropped. I am certainly happy to hear that Johnnie Preston is using the idea to good advantage at Mount Rainier.

BERNARR BATES,

Travel Editor, Sunset.



Washington, D. C., December 28

EDITOR—I have read with interest the item "What We Did About Cans" in the current issue of the *Bulletin*. That solution to the problem is, as I see it, the only sound one, regardless of the number of people in a group. It is the one I and my family have always practiced.

DEVEREUX BUTCHER,

Field Representative

National Parks Association

Forest Supervisors Transfer. Charles M. Rector, supervisor of Modoc National Forest with headquarters at Alturas, will transfer to supervisorship of the Umatilla National Forest (Pendleton, Ore.), and will be succeeded at Alturas by Neal M. Rahm, now supervisor of Inyo National Forest with headquarters at Bishop, it was announced today by Regional Forester Clare W. Hendee. Both transfers will be effective Feb. 18. Selection of a new supervisor of the Inyo is pending.

Club Books—A Progress Report

EDITORIAL blood and tears are being shed copiously as we try to complete several publishing projects before your winter evenings get too short for reading purposes. With the end in sight, we hope you, the members, will buy, read, and display the books rather than have the club store them. Hence, shop talk:

Special Publications Fund

Most of our publishing has been sped on its way by the generous Mexia bequest, much of which has gone into a substantial revolving fund which enables us to undertake deserving publishing ventures which could not be handled so well commercially, and thus to expand the club's execution of one of its purposes, "to publish authentic information concerning" Western mountain regions. Each publication need not return all the cost of publishing, but most of them should and a few may do better. Suggestions are welcome.

Reprint Enterprise

The reprinting of volumes 1-5 (2,000 pp., illustrated) of the *Bulletin* is completed. The handsomely bound books have been well received. Sets are now available at \$25, single volumes on a sliding scale (Vol. 1, \$10; 2, 3, 4, \$7.50; 5, \$5) so that the club won't lose on broken sets. Vol. 6 No. 1 is to be reprinted by the same eminently satisfactory means. Several people need it; are you one? All other numbers are still to be had in the original.

Starr's Guide

Thanks as always to Walter Starr—but this time more so—with supplementary thanks to David Forbes, the completely revised edition is as good as ready (the bindery has it now). The book has been reset from thoroughly revised manuscript and the map has been redone so as to accord with the text. The design is altered so that we can boast a book offering more information per knapsack-ounce than ever before. The price remains the same—\$2.

[And 1.00 1939 dollar's worth of food now costs 2.30 1951 dollars!]

Member's Handbook

Blanche Stallings assumed the task of assembling new material and revising old. Final page proof for the 1951 edition will have an "OK with corrections" before this notice reaches you. Members who have joined since August have a free copy coming (paid for in their admission fee). All others may have one for \$1. The new book has twice as many photographs, sixteen of Cedric Wright's having been added; all are varnished.

57-Year Index

George Shochat, after many months of diligent effort, has integrated his work on an index of the *Bulletin* from 1893-1949 with the independent research of Dorothy Bradley. We expect to have paper-bound books at \$2.50 in April. The index will be a key to the five-foot shelf of the *SCB* and will also, we trust, stimulate individuals and libraries to complete sets.

Climber's Guide

The Guide project, thanks to the William Shand Jr. Memorial, moves nearer to completion, under the direction of Allen Steck, Mountaineering Committee chairman. Parts on the Clark Range and Kings-Kern Divide will be in the 1951 Annual and reprints of them can be used with the *Preliminary Edition* of the Guide (\$2). This summer's field work should put the final touches on the first edition. Help can still be used.

Going Light—Backpack or Burro

The less about the backpack-manual delay, we think, the better. The revised MS has been gone over by a committee of Hildebrands—Joel, Alex, Milton, and Louise Klein—and we plan on books by late May (\$1.75). Few books have been so popular before having been written.

1951 Annual

The magazine number of the *SCB* is now in production. This year's could be called a mountaineering number (Waddington, Cas-

tle Rock Spire, North Face of Sentinel Rock, an analysis of expansion anchors, Mountaineering Notes). A feature of the issue will be twelve photographs by Philip Hyde; one observer said of the engraver's proofs, "You can feel the sun and the wind in them!" We will mail a copy to anyone you name for \$1 (or a year's subscription, \$2).

Order from the club office, 1050 Mills Tower, San Francisco 4. If you remit (including sales tax) with your order, the books are shipped postpaid.

The office can also supply these books in the

club's field by club authors: *Manual of Ski Mountaineering* (\$2.50), *Up and Down California in 1860-1864: The Journal of William H. Brewer* (\$6.50), *The Incomparable Valley: A Geologic Interpretation of the Yosemite* (\$3.75), *Sequoia National Park: A Geological Album* (\$3.75), *Marin Flora: Manual of the Flowering Plants and Ferns of Marin County* (\$4.50), *Yosemite, the Big Trees, and the High Sierra: A Selective Bibliography* (\$7.50). All but the two Matthes books have been reviewed in previous *Bulletins*.

An order now (billed later) for books in production will give us a clue to how many should be printed.

Plans Made for Lift on Shasta

Preliminary plans have been presented for the construction of a six-mile ski lift up the rugged slopes of Mt. Shasta, California. The designer's sketches call for the mammoth installation to be built in three sections at a cost of \$1,388,000, the entire rise in elevation being 9,000 feet. If the plans materialize, it will be the longest and largest lift in the world.

Mr. Ernest Constan, internationally-known designer and builder of ski lifts, worked out the plans from a survey map of Mt. Shasta, and then presented them to an interested group of business men from Los Angeles, San Francisco, and the Shasta area.

The program calls for two chairlifts and an aerial tramway, the first lift going from McBride Springs to the vicinity of Horse Camp, a total rise of 2,500 feet in an 11,500-foot distance. There would be a restaurant and warming shelter at Horse Camp, and this section of the lift would carry 250 skiers an hour.

The second section would extend 15,000 feet in length with a vertical lift of 2,500 feet to the heart where it is planned to erect another warming hut. The third portion, which would not be built until after the first two were in operation, would be 7,000 feet long with a rise in elevation of 4,000 feet.

Under the present plans, the first two lifts will be double chairs with plastic bubbles mounted in front to protect passengers from the wind. The third section will be an aerial tram with two enclosed cars capable of carrying 20 passengers each, the total capacity being 160 riders per hour.

The largest obstacle in the way of the project is the shortage of steel and copper brought about by the present international situation. All plans are being made with this in mind. Should investigations prove to make the project possible in spite of current priorities, it is contemplated that a corporation will be formed in the near future.

National Newspaper of Skiing, Jan. 15.

Addition Made to Muir Woods National Monument

A strip of land covering 41.87 acres, approximately 400 feet wide, contiguous to the Muir Woods National Monument, which is currently being used by the Government for automobile parking, was donated last fall to the United States by the William Kent Estate Company. This gift will permit an enlargement of the Monument by Presidential Proclamation to include the present parking place, providing a very valuable

"buffer strip" which will aid in the care and management of the Monument.

In transmitting the deed, the William Kent Estate Company expressed gratification for the able manner in which the N.P.S. has administered the Monument since the original gift in 1907. And in turn, the millions of people who have enjoyed Muir Woods can be very grateful for the continuing generosity of the Kent family.

Condors to Have Better Chance for Survival

The giant California condor has a better chance to win its race against extinction as a result of a recent decision by Secretary of the Interior Oscar Chapman.

The Secretary has issued an order restricting entry into the last stronghold of the some 60 remaining condors in North America.

The order withdraws from entry under the mining laws about 35,200 acres of land in the Los Padres National Forest. It permits limited entry under the provisions of the Mineral Leasing Act, for oil and gas, dividing the acreage into two categories, one in which there may be no entry on the surface of any area within half a mile of any condor nest known to have been active within three years, and the other a compact tract of 10,240 acres on which no surface entry will be permitted.

The latter is the heart of the condors' nesting refuge. Under the terms of the order, any operations in search for oil or gas under the surface of these 16 sections would have to be by slant drilling from outside the boundaries of the tract. The few existing mineral leases are not affected by the order, and will run their course.

The California condor has a greater wingspread than any other North American bird and is magnificent in flight. It is harmless to human interests. Probably the chief reason it has survived the heavy human settlement of California is that it could retreat to the very rugged relatively impenetrable mountains of Ventura County, where a refuge for its protection was established in 1948 by the U. S. Forest Service.

The withdrawal order implements the authority of the Forest Service and enables it to make the refuge effective. All forms of entry other than under the provisions of the mining laws and Mineral Leasing Act were already under the control of the Service. Through his action the Secretary has established a valuable precedent that holds promise of better protection of endangered wildlife on other federal lands.

Conservationists throughout the country may well take heart. The issue was not easily settled, but the joint action of many conservation organizations and federal agencies carried weight and brought victory.

JOHN H. BAKER,
National Audubon Society

Fifteenth Death Valley Expedition Planned

For many years now the College of the Pacific has sponsored a Spring trip to the desert. Membership in this fifteenth annual Death Valley Expedition is open to Sierra Club members, because we are told, Sierra Club members of past expeditions have proved themselves satisfactory companions and contributors to the trip. Naturally we are glad to hear it, as this well organized expedition has become a unique Pacific Coast institution, and has the enthusiastic recommendation of all who have experienced it.

The 1951 expedition will travel by air-conditioned buses. The itinerary includes the Kern River Canyon, Red Rock Canyon, Searles Lake, and the Alabama Hills, in addition to three days in Death Valley.

The expedition is not a white-collar trip,

but is a sage brush trek, the members sleeping on the ground unless it rains. The expedition truck carries camp equipment, stoves, refrigerators, tables, and food for eight days. Each night the members gather around a campfire for singing, fun, and educational talks by the experienced and competent staff, headed by Professors J. H. Jonte and A. T. Bawden of the Chemistry Department. The party is organized on a cooperative basis, each member having certain duties to perform, but the meals are prepared by the "gravy crew" of college boys.

The date: March 17-24, 1951.

The cost: \$62.00 which includes transportation, food, entrance fees, etc.

For information, write to Death Valley Expedition, College of the Pacific, Stockton.



WINTER EVENING, CLAIR TAPPAAN LODGE

Photo by Arthur E. Harrison

A handsome enlargement of this photograph has long been displayed at Clair Tappaan Lodge. It is high time for it to be exhibited to all *SCB* readers rather than just to those who visit the lodge and know what it looks like anyway, or can find out if they walk outside on a winter's night.

The snow is at last deeper than shown in the photograph; the new improvements in accommodations are amazing, and those who slaved to bring them about—scores of slaves—deserve grateful thanks. To be amazed best, drop up and use the lodge. Reservations are easier to get than many people know simply because many skiers have thought it would be sold out and have given up trying to get in.



50-51 Ski Judges Named

New test standards have been set up by the Sierra Club. A pamphlet describing the tests is at the club ski lodges—test cards, too.

At Norden, many of the ski-tow operators are test judges, and can give the fourth class test to candidates who accompany them to Signal Hill in the morning.

Ski tests will be given at Snow Valley this season as they have been in the past. Those who wish, may look up George Harr at Mount Waterman, where he works on the ski patrol. He is the Sierra Club ski test judge there and will gladly give the test.

Skiers should not apply for tests until reasonably sure of passing. For ski lessons, apply to the ski instructor.

Northern Judges

4th Class: Rainer Baldauf, Paul Spring, Don McClusky, Henry Cam.

3rd Class: Glenn Weber, Edgar Cerf, Dick Felter, Jim Mulholland, Don Huber, Phil Bettler, Robin Welch, John Thune, Ned Robinson, Leon Remov, Keith Lummis, Dick Blumberg.

2nd Class: Dave Brower, Lewis Clark, Alex Hildebrand, George Jester, Joel Hildebrand.

Ski Mountaineering: Dave Brower, Lewis Clark, Alex Hildebrand, Dick Leonard, Einar Nilsson, Bestor Robinson. *First Aid:* Dick Felter, Dr. Stewart Kimball, Doris Leonard.

Southern Judges

4th Class: Floyd Balsam, Bill Davies, Charles Gerckens, Paul Green, Wayne Mann, Harvey Mylander, Ruby Wacker.

3rd Class: Beverly Beck, George Harr, Thomas Kendig, Howard Koster, Phil Taplin.

2nd Class: Paul Flinchbaugh, Roy Gorin, Lester LaVelle.

Ski Instructor Now at Clair Tappaan

Those of us who have been led to believe that the very best ski instructors are of Scandinavian origin will be glad to know that Dennis Whiles is descended from an Englishman who comes of a long line of Norwegians.

Dennis is a staff member of the Bill Klein Ski School. He is billeted at Clair Tappaan Lodge this year and will hold classes exclusively for Sierra Club members and their guests. If you are a beginner and want to

get started the right way—if you are an intermediate skier with aspirations of whizzing down the Sugar Bowl slopes—or if you just want to improve your skiing to get more fun out of it, Dennis will personally help you to achieve your aim.

A special ski school rate has been established for lodge patrons staying a week or longer. Five regular lessons will be given Monday through Friday for \$6.00.

ZARA BROWER, in Jan. 8 *Vodeler*



WAUGH LAKE DAM, on Rush Creek, Inyo National Forest. Although not the type of structure envisaged in the small-dam project, it has far greater economic justification, for hydroelectric purposes, than a small dam for fishermen.



"GEM" LAKE (quotes supplied) Here are two views lower on the same stream, in the peak recreation month, August. A nice place to fish or to camp? This is a medium-sized reservoir for hydroelectric purposes, for which flow maintenance is far more important than it is to Sierra fishing—and the seasons when each use requires more flow don't always coincide.

It is not intended that the small-dam project would multiply these scenes. Nor is it known that they won't, once economic forces go to work on the small-dam precedent.



RUSTIC CHECK DAM, DAVIS LAKE, high on Rush Creek, in August. Although built for power purposes—to regulate the flow into Waugh Lake—this is about of the size wanted by small-dam-project advocates; they would camouflage it better (see page 14). Davis Lake is a little sad when all the boards are lifted, but none of the Gem Lake violence is wrought.

But how much assurance can there be that the small dam won't grow? And if economic pressure makes it grow, what happens to the fishing in the lake and downstream?

—Photographs by Philip Hyde

Should We Control Wilderness Streams and Lakes?

A PROJECT to maintain stream flow by means of small dams on Sierra lakes is already well under way. The objective sought is better fishing. Eleven such dams were built for this purpose in 1931-1934 at the heads of the Cherry and Clavey rivers in the Stanislaus National Forest. There are others in Desolation Valley and at the head of Meeks Creek in the Tahoe region.

Reports on the effects of these dams are favorable and convincing. At the present time the project has been revived by the active interest of the State Chamber of Commerce, fishermen, the State Fish and Game Commission, and the Division of Water Resources of the Department of Public Works. Some permissions have been given, and help and supervision supplied, by the Regional office of the U.S. Forest Service, within whose jurisdiction many of these lakes are situated.

The California Wildlife Conservation Board has appropriated \$300,000 to "initiate the program on a broad scale" (report by Seth Gordon, Consultant). With the recent passage of the Dingell Bill, for Federal Aid

in Fisheries, more ample funds will be available in the future. Preliminary surveys have been made at the head of Bear Creek, Minnow Creek, and Jackass and Granite creeks. In the latter, the engineering surveys have fixed the positions and the heights of the dams to be built. Designs for the dams have been approved, and it is understood that the project will be completed next summer.

Early action is required by those concerned about wilderness who would influence in any way either the decisions on basic policy or the selection of lakes for dam construction.

Arguments in favor of such dams are practical and easily understood. It is our belief that all fishermen and most conservationists will agree that there are no valid arguments against experimentation on appropriate lakes—and there are scores of them—so long as they lie *outside the boundaries of our designated wilderness reserves*. Some conservationists might like to see the project move slowly and on a limited scale until sufficient data can be obtained to avoid the problems of stream-bed deterioration which have developed in many of our rivers as a



result of interference with normal flow (see G. H. Matthes, *S.C.B.* 1950, p. 117).

When it comes to the proposed introduction of structures such as dams within the wilderness reserves, there are a number of cogent arguments against the project. It would appear appropriate therefore to enumerate briefly the benefits to be derived from the project, and the hazards which appear to us implicit in the program *if and when it is applied to our wilderness reserves.*

Arguments in Favor

1. Many high-mountain streams run low or dry up before the summer season is over. Dams could alleviate this, and the scenic advantages of flowing streams as contrasted to dry stream beds are obvious.

2. Pleasant campsites become available which cannot be used when the stream is dry. Dams would enhance recreational values in this respect.

3. Fish habitat will be aided or created, augmenting the recreational advantages of the area for fishermen. In his report to the Wildlife Conservation Board, Seth Gordon sums up the general impression in these words: "There can just be no valid arguments against a program which will maintain a flow of water in trout streams that would otherwise go nearly or entirely dry during the period from August to October, with partial or complete destruction of the natural fish population and its food supply."

4. Continuous stream flow offers scenic and practical advantages of keeping stream-side meadows green and growing throughout the season, where pack stock may be pastured, where the whole community of plants, insects, animals, and birds will benefit.

Arguments Against

[Some of the arguments advanced here have been or can be adequately met. They are included to complete the presentation of both sides. Note that most of the arguments are not against the dams per se, but against experimenting with them in wilderness.]

1. *The dams are artificial structures* added by man to the natural scene. The more obvious they are the more they disturb or destroy the wilderness atmosphere—intangible but nonetheless real and of paramount importance in a wilderness reserve, set aside for the specific purpose of preserving it as nearly unchanged as possible for this and future generations.

The early dams are conspicuous and disturbing. However, those now being designed will attempt to minimize this disturbance. Perhaps they can be made indistinguishable from the natural scene, camouflage being devised which will not be stripped off by moving or expanding ice and the erosive force of the spring runoff. To achieve this result will require skills developed through trial and error. The experiments should be made outside the wilderness.

2. *Dams will drown out meadows and trees along the shore.* If the lake level is held to mean high-water mark, as is now the plan of the Forest Service, it is thought that this will not occur. However, it remains to be seen whether damage will result from the long exposure to high-water levels which is contemplated. Normal high water may be only a matter of days or a week or two. What will happen when this exposure is lengthened to months? This can only be determined by field experiments which should be conducted outside the wilderness.

3. *Many lakes, so dammed, will develop mud flats* as the season advances and the water is drawn down. If the drawdown is limited to mean low-water levels this will not occur, or will not exceed the normal exposure of such flats, and then only late in the season—a possible advantage.

In some basins the storage obtained under these limitations will probably not suffice to maintain season-long flow. Storage capacity may in effect be increased by installing penstocks underground and drawing down the water below the normal low levels. In steep rock-walled lakes the only immediately apparent effect will be an emphasis of the fluctuations of the water mark. In shallow lakes abnormally large mud flats will

Summary

THE SMALL-DAM PROJECT for improving fishing and recreation in the mountains has much to commend it. The project should be initiated in suitable lakes and streams outside the designated wilderness reserves and carried on as a controlled experiment to determine how it affects the fish population and the other elements of the complex physical and biotic community. The project should be coordinated with long-range highway plans to avoid overimpact on fishing.

SINCE the quality of fishing depends not only on habitat, but on the number of fish and of fishermen and the enforcement of fish and game laws as well, there should also be an accelerated program for stocking more fish in the readily accessible lakes and streams outside the wilderness and provision for additional patrolling.

CONSTRUCTION of any dams within the wilderness reserves carries with it the threat of ultimate loss of the wilderness itself and therefore should not be permitted in advance of absolute necessity.

be exposed. In either event the waterline or submarine biota—part of a trout's food supply—might suffer; this method of increasing storage, however, would appear less damaging to the natural scene than a high dam which would drown meadows and kill trees.

4. *The precedent is dangerous.* To dam a wilderness lake is to convert a natural lake basin into an artificial reservoir site, a precedent for more disturbing developments later: the type of argument used today for the two-foot dam to benefit fishermen, can be advanced just as convincingly tomorrow for a twelve-foot dam, or a twenty-foot dam to benefit a community. And with the larger development we shall certainly lose the wilderness quality for which the area was originally reserved. Some of the proponents of development claim that the danger of precedent is overemphasized. Others of the same bent would legislate precedent out of existence—"this action is not to be construed as a precedent" was written into one recent bill. As Newton Drury has pointed out, however, precedent is defined as 'that which has gone before.' If it has been allowed to happen, words will not reverse it, nor will they prevent the consequences.

One of the consequences of the large dam for which the fisherman's small dam would serve as precedent is that the large dam could depreciate fishing if its reservoir fluctuated too much or if too little water were allowed to flow from it in dry seasons.

A serious consequence is that the position of the Forest Service as protector of the wilderness will have deteriorated. It is true that in its regulations for Wilderness Areas the Forest Service provides that water may be stored so long as no road need be built to construct the dam. Therefore the small dam, built of native and packtrain-borne materials, does not violate the Service's definition of a Wilderness Area even though the distinctive quality of wilderness be lost completely. With that distinctive quality lost, much of the reason for protecting that part of the wilderness any further is lost also. "To be safe, resist the beginnings."

5. *Major experiments in land and wildlife management should be conducted in wilderness reserves only as a last resort.* Other areas for experiment are more accessible, less easily damaged, and do not constitute so great a loss if damaged; the wilderness should be left as a control whereby man can



HUNGRY PACKER LAKE

Photograph by James MacBride

One of the many beautiful lakes at the headwaters of the middle fork, Bishop Creek, Inyo National Forest. The small dam at its outlet has done no damage which is apparent, if it exists at all. Many persons have passed by the dam without noticing it.

In this type of dam a pipe of diameter calculated to pass an even flow in late season can be imbedded in talus-camouflaged concrete. If the pipe is liable to sudden clogging, downstream trout may become landlocked; trout may pass this point only at high water; and manipulation of lake level may impair production of natural food. But these are anglers' problems and should be experimented with outside the wilderness.

Conservationists are concerned because even the small dam pictured is an artificial element in wilderness and may be used as a precedent, thereby leading to a development which would cause visible damage.

evaluate his progress—or lack of it—in his experimental management of adjoining lands.

Granted there is need for more and better fishing waters and for more and better camping areas. Granted too that the fishermen

probably constitute the majority group using the mountains and camps. The fact remains that there are scores of lakes and streams outside of the wilderness reserves, where such improvements to fishing and camping can be made without entailing this funda-

CAMOUFLAGED DAM Hungry Packer Lake

*Photograph by
Oliver Kehrlein*



mental sacrifice. Until these possibilities have been fully exploited and proved inadequate, there is no justification for breaching the wilderness.

There are many who seek fish in the wilderness today because only in the wilderness can good fishing be found. If good fishing were obtainable at less sacrifice of time, effort, and comfort, many fishermen would

not go into the wilderness. In the interests of this group, and of the wilderness itself, a determined effort should be made to improve fishing in nonwilderness areas and especially in regions relatively close to centers of population. Several suggestions are offered:

a) Provide superlative fishing in large lakes outside of wilderness boundaries, such

THOUSAND ISLAND LAKE

Here a small dam could long regulate stream flow. Abnormal persistence of a higher lake level would not much affect rocky shores but would alter beach-and-meadow-filled coves which make it a pleasant lake to camp by, and would drown out struggling island pines. The small dam would be a precedent for a higher dam to give near-by power for proposed mining operations—power otherwise to come from Owens Valley.

Conservationists fear that a small-dam program, under Forest Service control, could stimulate a larger-dam program beyond the agency's control, and that such stimulation should not originate in the wilderness.



LAKE OF GRASS

Kerrick Meadow, in Yosemite National Park, owes its being to a subsurface "lake"; a lowering of the water table by erosion will let weeds and trees replace the meadow. A small check dam may lengthen its life, or it may so retard natural drainage that a bog develops, containing poorer grass species and remaining so wet as to be easily cut up and destroyed by grazing animals.

The Sierra Club Board of Directors believe that check-dam effects over a long period of time in various situations and life-zones should be clearly ascertained outside the wilderness before the dam program is expanded.



GRASS PATTERNS ON LAKE

Intimate details of the shorelines of wilderness lakes fascinate the traveler, whether photographer or not. There is a likelihood that this species would suffer were lake levels to be manipulated. Man usually finds to his regret that disturbing one natural element starts a chain reaction.

Photographs by Philip Hyde



as Florence, Huntington, Shaver, Bass, and Vermilion (to be). Time and money can improve techniques and provide conditions suitable for a greater productivity than these lakes now enjoy.

b) Provide dams and improve habitat experimentally along the many streams and lakes which lie outside of the wilderness boundaries, but are more remote and difficult of access than the lakes just mentioned. For example in the region west of Hell-for-Sure Pass, in the basins of Flemming and Dinkey creeks and the Woodchuck country, there are at least forty lakes. Up and down the Sierra there are scores more of the same sort. Here is the logical field for improving stream flow, camping, and fish habitat, as well as for obtaining experimental data.

c) Create small storage reservoirs at the heads of some of our streams in the Coast Ranges, where precipitation is good but the runoff rapid and complete. It is possible that some of these basins can be made to provide season-long stream flow and good fishing. The project warrants careful study.

d) Since roads and highways influence the distribution of human populations and fishing pressures, we would urge the integration of our highway plans with any major plans to improve our fish resources, to the end that gains in fishing brought about by the small-dam project will not be canceled at once by a new road.

6. It is recognized that at some future time the need for high-level storage of water, for various purposes, may become so imperative that wilderness reserves will be considered a luxury which can no longer be afforded. But we face no such situation today, and to build dams in wilderness now is to jeopardize the integrity of the wilderness prematurely. Until an imperative need has been established, and until it is proved to be

more cogent than the need for wilderness, no such risk should be permitted. The need for dams in wilderness will not be imperative until:

a) All lower level reservoir sites along our deep river canyons have been fully exploited and there remains a substantial part of the runoff which escapes beneficial use. This situation does not confront us yet.

b) The difference in evaporation, which has been assumed to be less at high level, has been proved and is of such substantial volume as to be more valuable than the wilderness itself. We have not yet been able to ascertain the facts, and the assumption as it applies to our high mountain lakes is questioned.

c) All available methods for the salvage and re-use of industrial and sewage waste water have been applied. This step in our water economy is in its infancy.

d) We are convinced that it is impracticable to use atomic energy and the ocean as a source of power and fresh water.

7. *The wilderness reserves are important to the nation economically as well as spiritually.* They contribute substantially to the revenue of the regions in which they have been protected by their attraction of tourists from less-favored regions, and as wilderness everywhere grows scarcer they may be expected to increase in drawing power.

Conclusion

The wilderness reserves should not be sacrificed in advance of absolute necessity. Their integrity should not be jeopardized by permitting a breach, however small and innocent it may appear today, to be made in their lines of defense. Through that breach, step by step, can come the destruction of the wilderness.

DR. HAROLD C. BRADLEY