



Natural rock garden along Highway 36, Maui

Sierra Club Bulletin

JANUARY 1969

President's Message

New Year; New Challenge

Using labels, which is common practice these days, 1968 can be described as the Year of the Conservationist. There turned out to be a surprising number of us around. We rallied more support than anyone ever dreamed we could. We established both parks and principles. We made a lot of people think as they had not thought before. We made a difference.

Now that there's a new year and a new Administration, we may be told that we should slow down, shut up, and stop hogging everything. People in high places may make unkind remarks about "Conservation for Conservation's Sake." It may be argued that 1969 should be the Year of the Developer. (See Washington Report, page 24.)

Labels are often helpful, and they do seem to make things clear and simple. In our case, however, the simplistic approach is obscuring the real and burning issue facing both Conservationist and Developer in 1969. The critical question is not who is to be top dog. (Good Conservation and good Development need not be mutually exclusive, by the way.) In this terribly late hour, the issue that faces us all is the fact that we have come another year closer to the environmental crisis which may threaten man's ultimate survival on planet Earth.

We keep closing our eyes to what we are doing to our physical environment, and what this may mean to us. The natural resources we are so busy toying with, and too often destroying, comprise a good part of man's ecological habitat. And man is as perilously dependent upon particular physical requirements as any other kind of animal—as the bald eagle, the condor, or the grizzly bear. By our continuing disregard of this fact, by our massive pollution of air, water, soil and watersheds, of space and beauty and quietness, we are endangering the most important species of all—ourselves.

This is what must concern all of us in 1969. As we continue to accept wood products as essential to our way of life—how did we ever get along without Kleenex?—let us consider, too, that trees, green growing things, are essential to human life itself. (Do we know how many of earth's forest we can spare?) When we fill our bays and dike our tidelands, let us be mindful that living marshes provide one of the most effective counteractors to the smog we are pouring into our skies. (What will be the ultimate effect of the change in earth's temperature that smog can produce?) As we spray more and more of the world's croplands with chemicals, let us recall that DDT is now established in the global food chain. (What is the human tolerance to this pesticide and others?) As we dump our garbage into our oceans, let us be aware that we are not disposing of it, merely relocating it. (How long can we afford not to process it for reuse?)

This year offers the Sierra Club a mighty challenge. We must continue our fight to save the beautiful and unspoiled places that remain on earth; that is our avowed purpose. More importantly, we must be aware of what is happening to the total human environment—and we must make others aware. Our vision must grow even as the problems grow. We must keep our voices raised loud in the land. We must remain the most positive activist force in conservation.

Regardless of label, whether Conservationist or Developer, we hear the same sonic booms, breathe the same air, drink the same water. Ultimately, we all share the same home.

EDGAR WAYBURN



Sierra Club Bulletin

JANUARY 1969
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... TO EXPLORE, ENJOY, AND PROTECT
THE NATION'S SCENIC RESOURCES ...

COVER: The front cover photograph and the pictures on pages 12 and 13 were all taken within a few paces of Highway 36 and Highway 31 on the island of Maui.

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

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Oil shale policy passes to new administration

Though the oil-bearing shale rock formations in the mountains of Colorado, Utah, and Wyoming have been estimated to contain oil worth at least \$5 trillion, only three bids were received in the Department of Interior's recently held competitive bonus bidding on three test sites in northwestern Colorado. The government owns 80 percent of the land under which the oil shale formation is found, and the three test leases, each presenting a different technological problem, were on sites in Rio Blanco County, where the richest shale deposits lie. The Oil Shale Corporation (TOSCO) bid \$249,000 on Tract 1 and \$250,000 on Tract 2. TOSCO officials said they will offer a higher bid if their company is allowed to make further exploration and if changes can be made in the leases. The third bid came from an individual in Eugene, Ore., who bid \$625.50 also on Tract 1. Secretary of the Interior Udall, caught between interests on one side who favor liberal leasing arrangements and opposing interests who ask for tighter environmental controls, decided to issue a limited number of test leases outlining production and royalty arrangements and pollution safeguards. The Secretary wanted to see if it was possible to develop an oil shale industry under these restrictions. However, the Department of Interior is not expected to accept any of the three bids, and this will leave the oil shale development program to the incoming administration.

New York City petition reopens Storm King issue

The Federal Power Commission will reopen hearings March 4 on the controversial Storm King Power Project. The new hearings will consider a petition by New York City maintaining that blasting during construction of Consolidated Edison's proposed hydro-electric plant in the Hudson River Highlands could endanger the Catskill aqueduct which supplies 45 percent of the city's water supply. The FPC is investigating an alternate site for the project about a mile and a half south of Storm King Mountain. However, the proposed alternate site would put the plant inside the Palisades Interstate Park, a public park jointly administered by New York State and New Jersey.

New interest rate on water projects to hike costs 40%

The Federal Water Resources Council has established a new interest rate formula for estimating costs of federal water projects that could make a number of projects currently on the planning boards economically infeasible. The Water Resources Council increased the interest rate used in evaluating costs of water projects from $3\frac{1}{4}$ to $4\frac{5}{8}$ percent as of December 23, 1968. The increased rate results in cost projections 40 percent higher than projections under the previous rate. In the past Congress has only been willing to authorize flood control and reclamation projects having a benefit-cost ratio of at least 1 to 1. Under the new higher interest rate only a project which heretofore had a benefit-cost ratio of at least 1.4 to 1 could be approved. Studies on a rate increase came after President Johnson observed

in his fiscal year 1969 Budget Message, "The interest rate now being used by federal agencies in formulating and evaluating proposed water resource projects is significantly lower than the cost of borrowing by the Treasury." The new rate, which would be closer to what the government must pay to borrow money, would lessen federal subsidies to dam construction. Power interests, who have been opposing any increase in rates, are now trying to get benefit calculations liberalized. An inflation of benefit figures could completely negate the effect of the new interest rates. A public hearing on the proposal to liberalize benefit calculations was held January 13 in Washington, D. C.

No decision yet on public role in highway planning

The Johnson Administration, congressmen from urban areas, and big-city mayors clashed with most of the nation's governors and state highway officials over the Federal Highway Administration's proposed procedures for federal highway planning. The Highway Administration held a week-long hearing on the new rules in mid-December and is in the process of deciding whether to put the regulations into effect as proposed or to modify them. The new regulations would insure full public participation in the development of federally aided highway projects by (1) requiring two hearings, one on routing and the other on design, and (2) allowing "any interested person" who believes that a route or design is not in the public interest to appeal to the FHA Administrator. Secretary of the Interior Udall, speaking in support of the new regulations, said, "Time after time under present procedures, we have had to stand by while highways sliced up our cities or invaded irreplaceable park and open space areas." The state highway administrators who testified at the hearing felt the proposed rules would enable opponents of a highway to delay the project by an endless series of protests and appeals. Massachusetts Governor John A. Volpe, incoming Secretary of Transportation, has been quoted as opposing the new highway regulations.

New mining laws to protect non-mineral resources

Among the rule-changing proposals coming from the Department of Interior recently are the revised regulations for surface mining operations on lands under the jurisdiction of the Bureau of Land Management and the Bureau of Indian Affairs. The recently announced regulations, which have not yet been put into effect, modify proposals set forth on July 20, 1967. A major requirement of the new regulations is that a federal official make a technical examination of prospective effects of the planned exploration or surface mining operation upon the environment. The examination is to take into consideration "the need for the preservation and protection of other resources, including cultural, recreational, scenic, historic, and ecological values; and control of erosion, flooding, and pollution of water; the isolation of toxic materials; the prevention of air pollution; the reclamation by revegetation, replacement of soil, or by other means, of lands affected by the exploration or mining

operations; the prevention of slides; the protection of fish and wildlife and their habitat; and the prevention of hazards to public health and safety." Based upon this examination, the federal official having jurisdiction, "shall formulate the general requirements which the applicant [for a permit or lease] must meet for the protection of nonmineral resources. . . ." The proposed regulations require that the mine operator shall file a performance bond "in an amount sufficient to satisfy all reclamation requirements" before any exploration or mining plan is approved. On several points the new proposals are weaker than those offered in July 1967. Perhaps most important, the new proposals outline appeal procedures for "an applicant, permittee, lessee, or contractor;" whereas, the earlier proposals provided for appeals by "any person adversely affected by any official or decision made under the authority of these regulations." In addition, conservationists urge broadening of the provision that mining operations can be restricted or prohibited only when previous experience under similar conditions has shown that the operation would result in landslides, substantial deposition of sediment, or other destructive consequences. Because conditions are not always parallel, the proposed mining regulations would be strengthened if restrictions on operations were also authorized whenever knowledge of actual conditions made it seem unlikely that a mining operation could avoid destructive consequences.

N.J. Water plan may flood part of Great Swamp

In mid-December the Army Corps of Engineers publicly announced a flood control plan for the Passaic River Basin in northern New Jersey which would create two reservoirs, one as big as and the other two times bigger than the state's largest lake. The plan calls for two dams, an upper dam near the Great Swamp known as the Meyers Road Dam, and a lower dam at the confluence of the Passaic and Pompton Rivers, known as the Two Bridges Dam. The reservoir to be created by the Meyers Road Dam would flood part of the adjacent national wildlife area and would interfere with the natural drainage of the Great Swamp, possibly flooding part of the recently designated wilderness area. The Two Bridges Dam, planned to provide most of the flood retention, would permanently inundate 5000 acres including an area known as Great Piece Meadows, an open area of importance to the Atlantic Flyway. The project will require over 90 miles of diking, and the total cost is estimated at \$415 million with 81 percent to be paid by the federal government. The North Jersey Group of the Atlantic Chapter is studying the impact of the flood control plan.

Governor Nunn may act to save Red River Gorge

Louie B. Nunn, governor of Kentucky, has indicated that he may intervene to prevent construction of a dam that would flood a section of the scenic Red River Gorge. The governor, who visited the gorge several times this fall, said he would take steps to save the gorge if another way can be found to provide Lexington with a long

range water supply and provide flood control for several other communities. The present damsite on the Red River has been approved by Congress with the stipulation that the Corps of Engineers restudy the project's storage requirements. Lowering the water storage capacity of the dam would reduce the extent of flooding in the gorge, but it would not save what Gov. Nunn terms "a fantastic place."

Petitions against Disney resort confiscated

Several petitions protesting the mass use resort planned for Mineral King, a wild area bordering Sequoia National Park in the High Sierra, were confiscated by the Forest Service this fall. Mrs. Richard Koch, who has a cottage near Mineral King on land leased from the Forest Service, had placed information at her mailbox on the proposed Disney development of Mineral King valley, along with petitions opposing the project and bumper strips saying "Keep Mineral King Natural." Signs placed at both approaches to the mailbox invited passersby to sign the petition and take a bumper sticker. Two weeks later a ranger stopped and removed the materials, including the petitions containing 75 to 100 signatures. "I approached and asked him for my petitions. He replied that I would have to see the District Ranger at Springville," Mrs. Koch said. Mrs. Koch was without a car at the time and was unable to go to Springville. "Subsequently we have received a letter from Mr. Werner, [the District Ranger] stating that the District Ranger must approve all signs posted near cabins. We feel our mailbox and our signs were not on Forest Service land but were on the road easement which is Tulare County property. In any regard, we feel that confiscation of material in this manner by the Forest Service is arbitrary and in poor taste . . .," Mrs. Koch said.

Interior proposals for two Alaskan wildlife refuges

The Department of Interior is initiating action to designate about 1,265,000 acres in Alaska as part of the National Wildlife Refuge System. The lands, currently administered by the Bureau of Land Management, will be transferred to the Bureau of Sport Fisheries and Wildlife. A proposed new refuge is the Cape Newenham National Wildlife Refuge, a 265,000-acre peninsula extending out into the Bering Sea. Also an addition of 1 million acres to the Clarence Rhode National Wildlife Range is proposed.

Dos Rios Dam up for state action in February

The \$400 million Dos Rios Dam, first in a series of joint federal-state water storage projects planned for three of California's northern rivers, will go to Governor Ronald Reagan for action in February. This proposed dam on the Eel River will inundate historic and beautiful Round Valley, including 35,000 acres of prime agricultural land; it will violate treaties with seven Indian tribes; and it will result in a warm water lake larger than the Shasta and Oroville reservoirs combined. A number of engineers, econo-

(continued on page 23)

Actions of Board at December Meeting

THE SIERRA CLUB BOARD OF DIRECTORS met December 14 and 15 in San Francisco with all 15 directors present. Included in the business before the Board was action on Diablo Canyon and on the charges brought against the Executive Director in October by three board members. The next regular meeting of the Board was set for February 8 and 9, 1969, in San Francisco.

● **Diablo Canyon.** The Board voted 8 to 6 (with the chairman abstaining) in favor of putting the Diablo Canyon issue on the April ballot. Martin Litton, seeking a policy decision from the Board, had proposed the following motion: "The Sierra Club opposes the construction of any proposed and/or projected electrical power plant or appurtenant structures or works at, in, or near Diablo Canyon in the County of San Luis Obispo, California, and will take all lawful means to save, conserve, and restore the integrity of the San Luis Range."

Phillip Berry later said: "Whether Martin believes it or not, which of course is irrelevant, I still believe that there should be no plant at the particular site. And I would vote with him if that were the only issue involved, but the issue that I saw clearly for the first time at Norden was whether or not the club would survive, and I think the issue still is that. With that in mind I would like to propose what I think can be a solution perhaps for all of us. I'd like to move a substitute motion that Mr. Litton's question be put on the ballot and let the membership vote on it." The substitute motion was approved.

The information sheet which will be mailed with each ballot will offer pro and con arguments on the resolution. In addition, the February Bulletin will carry a summary of the basic issues involved in the Diablo Canyon controversy, including excerpts from the discussion on Diablo at the December Board meeting.

● **Disposition of charges.** In October Directors Richard Sill, Ansel Adams, and Richard Leonard sought dismissal of Executive Director David Brower charging: "(1) he has unlawfully attempted to divert Sierra Club funds; (2) he will not accept a position subordinate to the legally and duly constituted authority of the Sierra Club; and (3) he is financially irresponsible." At a special meeting called October 19 in San Francisco to hear the charges, the Board denied and rejected the first charge. Brower was given time in which to prepare a reply to the second and third charges. His reply was submitted to members of the Board several days prior to the December meeting. At the December meeting, after discussion in closed session, the Board approved the following motion offered by David Sive: "With respect to the charges against the Executive Director made by Messrs. Sill, Leonard and Adams at the special meeting of the Board of Directors of the Sierra Club held on October 19, 1968, and supplementing the action taken by the Board of Directors at the said meeting, the Board of Directors will continue to consider and act upon the recommen-

dations of the Reorganization Committee taking into account any facts developed upon investigation of the said charges."

● **International book series.** The Board of Directors approved a limited authorization for a proposed international book series. This authorization will allow Executive Director Brower to seek funding for the series while studies of the new publishing project are undertaken by various Sierra Club committees. In outlining the international series of Exhibit Format books, Brower said, "I like to think of the Galápagos volumes, the two of them, as, you might say, the extended foreword to a whole series. The next book I would like to see out in it would be, you might call it, the table of contents volume, also to sell for \$25. The proposed title is *Islands of Wilderness: A Prospect*." Brower estimated that the series could total about 100 titles with four or five books to be published each year.

August Frugé, chairman of the Publications Committee, speaking as an individual, opposed this expansion of the publishing program on the grounds that the program should be an auxiliary activity of the club. "We have to make publishing the servant of conservation, and I'm afraid that a huge club program of this kind means that publishing is undertaken for its own sake and not for other purposes," he said. Frugé suggested, if the club wants to get into a larger publishing program, that the Board consider licensing the production operation in an arrangement similar to what the club already has with Ballantine for the production of paperbacks. Another suggested alternative was for the Sierra Club to form a subsidiary corporation for publishing.

The limited authorization of the new series as approved by the Board is: "Resolved that to the extent of (1) joining with the Conservation Foundation in seeking funding of the proposed international book series and (2) seeking potential authors of books in the series and doing other preparatory work short of committing the club to any binding contract or contracts to publish any books in the series, the Board of Directors hereby approves Sierra Club participation therein, provided that (1) the Board of Directors hereby reserves all further action in connection with the said series until the next regular meeting and hereby directs the following committees to study and report to the Board concerning all aspects, short range and long range, of further participation in the said series: the Publications Committee, the Legal Committee, the Reorganization Committee, the Financial Advisory Committee as well as other agencies of the club, Council, and others. And it is further resolved that this authorization to proceed with the said series to the limited extent set forth above shall not be deemed to commit the board or the club legally, financially, or morally to any further participation therein without action by the board."

● **New chapters.** The Great Lakes Chapter supported the applications of three of its groups, Ohio, North Star, and Cumberland, for chapter status. The Board approved the ap-

plications, and, as of January 1, 1969, the Ohio Chapter will serve the State of Ohio; the North Star Chapter, the State of Minnesota; and the Cumberland Chapter, the states of Kentucky and Tennessee. Current membership in the new chapters is Ohio, 725; North Star, 420; and Cumberland, 300.

● **Mailing lists available.** President Wayburn announced that the club mailing lists are to be available to members who wish to prepare mailings concerning the club election. People who request the mailing lists will be charged for the cost of the lists and the expenses involved in servicing the lists by the club office.

● **Guidelines for chapter publications.** The Board informally agreed that the Sierra Club Council was the proper representative body to draw up guidelines for chapter publications. President Wayburn directed the Council to prepare guidelines "for reasonableness, good taste, and fair play" which should be followed by the chapter newsletters in the coming club election.

● **Mineral King legal action.** Disney Enterprise's proposed development of a mass use resort in Mineral King is behind schedule. The National Park Service just recently approved the general alignment of an access road to Mineral King through Sequoia National Park. The promoters hope to have final clearance this spring so road construction can get underway this summer. The preliminary permit to the Disney interests has been extended until September, 1969. If road construction begins and approval is granted for the development plan, a 30-year permit may be issued by the Forest Service. The Sierra Club went on record as opposing the Disney development in May 1965. At the December 1968 meeting the Board authorized legal action: "Subject to appropriation of funds for this purpose by the Executive Committee within allocations of the budget, the staff is authorized to undertake appropriate legal action to protect the Mineral King area and Sequoia National Park from such development as is not consistent with established club policy." (For details on the proposed Disney development of Mineral King see the September 1968 issue of the Bulletin, page 5.)

● **Airport in the Everglades.** A 38-square-mile airport—it would be four square miles larger than Miami, Fla., and six times the size of New York's Kennedy International Airport—has been proposed in southern Florida. Planned to accommodate superjets and the SST, the design of the airport is flexible enough to permit ultimate conversion to a spaceport. Local officials envision a community of 1 million people eventually surrounding the airport. In his report on the airport complex to the Board, Gary Soucie, the club's Atlantic representative, reported that the total development may require large quantities of water from Florida's water conservation areas. Even without the airport or the expected residential development, Soucie said there will not be enough water after the next 25 to 40 years under current flood control arrangements in the area to meet all projected needs, including those of Everglades National Park. In addition to

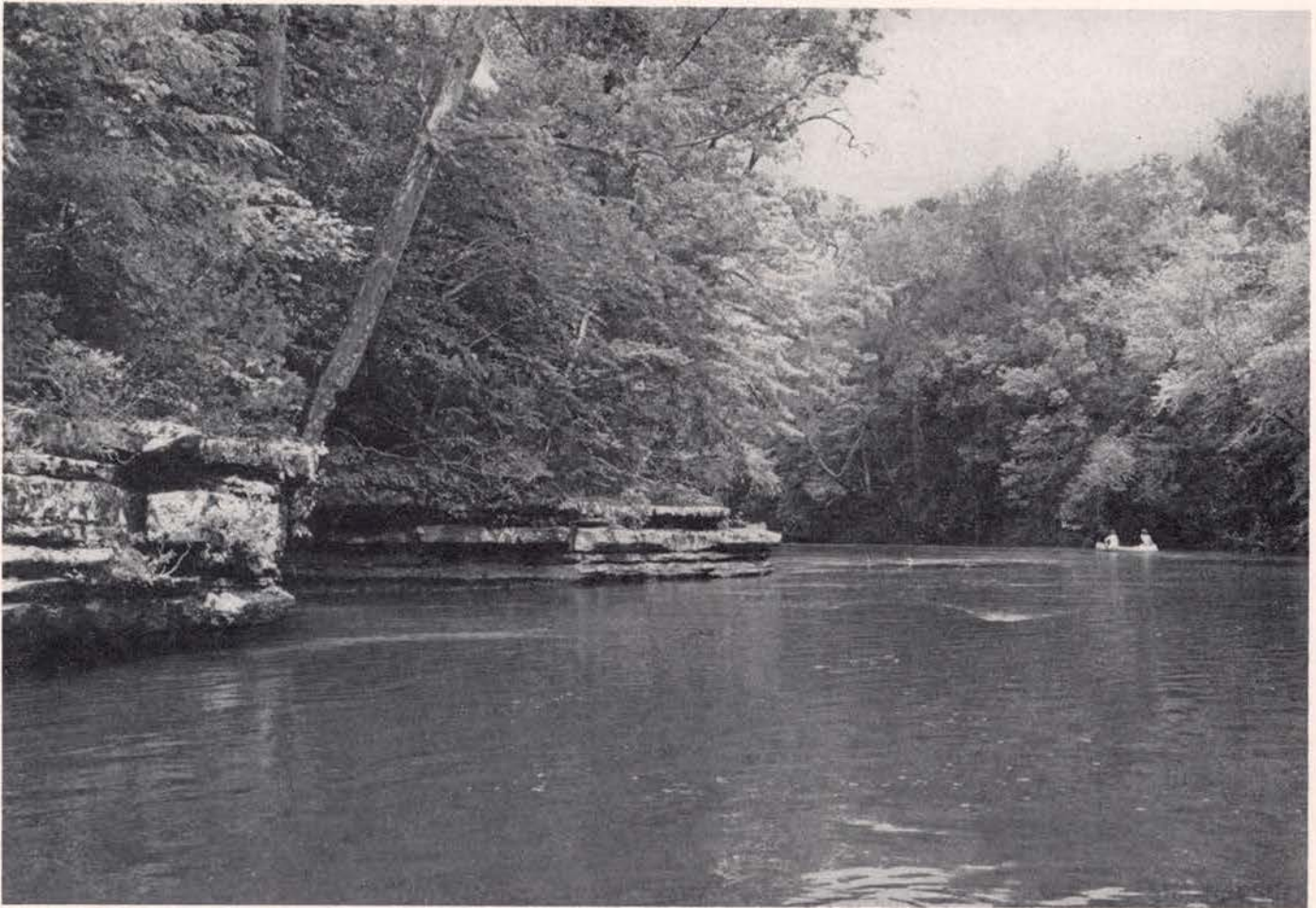
the question of water supply, the airport poses noise, water, and air pollution problems for the Everglades region. Conservationists are also concerned about routes for access roads to the airport and its surrounding community. In formulating club policy on this issue, the Board resolved: "The Sierra Club opposes the construction and development of any airport in southern Florida, the location, operation, or service of which will be detrimental to the preservation and enjoyment of Everglades National Park, or which will seriously impair the wild and natural character of the Everglades region."

● **West Chichagof Island Wilderness.** No land within the two national forests of Alaska has yet been set aside for wilderness. At the same time nearly 99 percent of the commercial timber has been slated for cutting with sizable portions under 50-year timber contracts. West Chichagof Island in Alaska's Tongass National Forest is included within the area of a long-term timber sale, and logging is expected to begin there next year. Because its 430,000 acres comprise a representative example of the island forest of southeastern Alaska which will soon all be logged if some wilderness is not set aside, the Board resolved: "The Sierra Club supports the proposal of the Sitka Conservation Society that the western portion of Chichagof Island and Yakobi Island be maintained as wilderness and administered for that purpose."

● **Reclassification of Emigrant Basin.** The Board approved the recommendation of the Mother Lode Chapter concerning wilderness classification for Emigrant Basin, an area located just north of Yosemite National Park containing similar terrain. The Board resolved: "The Sierra Club supports the proposal of its Mother Lode Chapter that the Emigrant Basin Primitive Area be reclassified as a wilderness area of 111,100 acres, and it urges Congress to place this area within the National Wilderness Preservation System, including the Snow Lake Area." A Forest Service hearing on the Emigrant Basin Primitive Area is scheduled in the spring of 1969.

● **Torrey Pines.** At the request of the San Diego Chapter the Board of Directors resolved: "The Sierra Club supports the inclusion of the Torrey Pines extension within the California State Park System." The state has allocated \$900,000 for acquisition of 200 acres of land on which the last remaining stand of Torrey Pine in the United States is found, and the San Diego Chapter is organizing a fund drive to raise the rest of the money needed to purchase the land. Development of a subdivision planned for this area is being held up pending the outcome of the fund raising effort.

● **Grazing fee increase.** In support of recently proposed federal regulations to increase grazing fees on lands administered by the Bureau of Land Management and the Forest Service, the Board resolved: "The Sierra Club supports the proposals of the Department of Agriculture and the Department of the Interior to raise fees for grazing permits on public lands to a level which represents their fair market value." Currently ranchers pay only 25 to 35 percent of what forage would cost on private lands.



The Collins, a Class II "pastoral" river

Volunteer State Shows the Way

by William L. Russell

Six months before Congress established a National Wild and Scenic Rivers System, Tennessee pioneered at the state level. The Tennessee legislation is a model for other states that wish to supplement the national system with statewide systems of their own.

DURING THE WEEK BEGINNING MARCH 31, 1968, President Johnson announced that he would not run for another term, North Vietnam announced that it would come to the conference table, Dr. Martin Luther King was killed, and subsequent rioting reached its peak. It is not surprising that the signing into law of the Tennessee Scenic Rivers Act of

1968, during that week, received scant attention even in Tennessee. The act is of more than local interest, however, and the events surrounding its passage were highly dramatic to those closely involved.

The national significance of the act was immediately recognized by conservation organizations. L. S. Clapper of the National Wildlife Federation wrote, for example, that: "Tennessee has become the first state to establish a comprehensive scenic rivers system, an action completed only hours before the legislature recently was adjourned. Signed into law by

ALL PHOTOGRAPHS ARE BY THE AUTHOR



*Angel Falls, Big South Fork of the Cumberland River
(which was deleted from the Tennessee Scenic Rivers Act)*

Governor Buford Ellington, the bill thus gives Tennessee a 'leg up' on the U.S. Congress, which still is considering a National Wild or Scenic Rivers System." [For details of the national system subsequently enacted, see Nov. '68 SCB.] It is refreshing for Tennesseans, painfully accustomed to seeing their state listed as forty-something in rank on many progressive measures, to find themselves out front and showing the way. Tennessee is happily handing out copies of its act to the many states in which the scenic rivers movement is now spreading.

Rivers eligible for inclusion in the Tennessee system fall into three classes, described as follows in the act.

CLASS I: NATURAL RIVER AREAS

Those free-flowing rivers or sections of rivers with shorelines and scenic vistas unchanged, or essentially unchanged, by man, with no extensive paralleling roads closer than one mile (except in gorges where there must be no extensive paralleling roads within the gorge or within one quarter mile back from the gorge rim), and with only a limited number of crossing roads or spur roads

existing at the time of designation as a state scenic river. Additional access would be limited to trails. Waters would be kept unpolluted. Lands adjacent to these rivers that are not already in state or other public ownership should be protected by acquisition of fee title or by conservation easements to the full extent necessary to preserve a true natural environment. These river areas should be managed in accordance with the concepts embodied in the national Wilderness Act, and would represent samples of natural America saved unspoiled for this and future generations to enjoy as precious pieces of our natural heritage.

CLASS II: PASTORAL RIVER AREAS

Those free-flowing rivers or sections of rivers the lands adjacent to which are partially or predominantly used for agriculture and other dispersed human activities which do not substantially interfere with public use and enjoyment of the rivers and their shores. Waters would be kept unpolluted. Lands adjacent to any such river would remain primarily in the type of use existing at the time of designation as a state scenic river or else be allowed to revert to natural conditions. Scenic values should be preserved by acquisition of conservation easements, zoning and similar means, and by acquisition of fee title of areas set aside for access, camping and recreation. Acquisition of fee title of other areas

would not be precluded, particularly where the cost of alternative methods of land use control is comparable to the cost of acquiring the fee with lease-back or other similar arrangements.

CLASS III: PARTIALLY DEVELOPED RIVER AREAS

Those rivers or sections of rivers in areas affected by the works of man, but which still possess actual or potential scenic values. Included would be rivers with some housing or other building developments near their shorelines, rivers with parallel roads or railroads, rivers with some impoundments, and rivers polluted, for example, by strip-mine run-off. These rivers would be managed to prevent further loss of scenic values, to improve the scenic aspects of their surroundings, and to restore the quality of their waters. A polluted river section in an otherwise natural area could be improved to the point where it would be upgraded to Class I. Lands adjacent to any such river, and the use thereof, should be subject to public control by zoning, tax incentives, acquisition of easements or fee title and other means sufficient to realize the purposes for which such river is designated a state scenic river.

Rivers and segments of rivers designated for inclusion in the initial system include three in Class I, six in Class II, and four in Class III, totaling 358 river miles. Under the act, more may be included later.

Many individuals and groups played vital roles, but special credit for the scenic rivers legislation must go to two citizens' organizations: the Tennessee Citizens for Wilderness Planning (TCWP) and the Tennessee Scenic Rivers Association (TSRA), both formed in 1966. One individual who deserves special mention is TSRA President Robert A. Miller, a native Tennessean who had become increasingly depressed as more and more rivers he loved turned into dead reservoirs. Miller drafted suggestions for a scenic rivers system and presented them to a TCWP meeting at Oak Ridge on February 1, 1968. One attentive listener was State Representative J. William Pope, Jr., sponsor of the Tennessee Strip Mine Act of 1967, who undertook to introduce a bill based on Miller's suggestions if it could be drafted promptly enough.

Bill Pope, Bob Miller, my wife (who is president of TCWP) and I—all four of us busy with other jobs—struggled for two weeks to hammer out a bill. The day after it was typed, Bill Pope introduced it in the House. Shortly thereafter, Senator Don Moore introduced the bill in the Senate.

The bill passed the House after eight of 16 rivers were deleted from the initial system. We then worked hard to get the deleted rivers restored by amendment in the Senate, but

Roaring River, a Class I "natural" river



the bill was bottled up in the Calendar Committee. Finally, it reached the Senate floor in the last few hours of the last day of the Session. To our horror, two amendments were passed by the Senate in this last half day—too late for a conference committee to resolve Senate-House differences. Most of us abandoned hope, but Bill Pope walked the bill to the House, and by some miracle, after an initial tie vote, was able on a second vote to get concurrence minutes before the General Assembly adjourned.

Although a number of fine rivers were deleted by amendment, the wording of the bill passed almost unscathed. With a good act to build on, it should be possible to restore some or all of the deleted rivers despite the brainwashing activity of dam-building agencies. "It is the policy of the General Assembly," says the Scenic Rivers Act, "to maintain a proper balance between reservoirs and free-flowing rivers, to provide, thereby, a desirable variety of scenic, recreational, scientific and other values." That "a proper balance" requires the addition of more rivers to the system is easy to demonstrate. Most people are shocked to learn that the Tennessee Valley Authority *alone* has more than 10,000 miles of reservoir shoreline—more than all the Great Lakes combined. And acreage that has been acquired for TVA reservoirs *alone* is 250 times as great as the minimum acreage required for the

initial Scenic Rivers System. The imbalance is even greater, of course, when you take Corps of Engineers projects and other Tennessee reservoirs into account. It is hard to see how there can be much opposition to the addition of more rivers to the system, but our citizens' organizations are realistic enough to know that continued vigor is necessary for the survival and enrichment of any conservation legislation.

Looking back, we attribute success not to any single person, group, or action; we can see now that if any one of dozens of people had failed in some particular, the outcome could have been different. Many organizations and individuals joined forces with us in the hectic race to success. The Tennessee Conservation League, with its large membership and many affiliated clubs, gave us strong support. Other conservation groups, white-water and canoe clubs, and a regional development group, the Hull-York-Lakeland Association, aided us. At the risk of immodesty, I must mention the work of Lee Russell, my wife, who was a tireless fount of factual information and intelligent persuasion. When all is said and done, however, it was the spare-time work of a comparative handful of citizens that in less than two years initiated and achieved a major piece of conservation legislation. The encouraging conclusion is that the climate must now be right for such achievements.

Sandstone gorge of the Obed River, deleted from Tennessee's initial Scenic Rivers System but a candidate for inclusion in the National Wild and Scenic Rivers System



Some Reasons for the Proposed Dues Increase

ARTICLE XVII OF THE BYLAWS provides that "the annual dues of regular, spouse, and junior members shall be set by the Board of Directors subject to the approval of the membership by a two-thirds majority of the ballots cast on such issue." A dues increase was proposed at the Board meeting of September 14-15, 1968. Introduced by Treasurer William Siri and seconded by Director Ansel Adams, a resolution was passed unanimously to place on the next general ballot a referendum proposal to increase regular dues by \$3 for general conservation activities, with one-third of the increase to be allocated to chapters.

This referendum proposal for a dues increase will be one of the most crucial items on our April ballot. What kind of Sierra Club we will have, what its role will be in the conservation effort, how strong and effective it will be in the future—all will depend in good measure on our members' decision on this issue. It is most important that we understand the reasons for the Board's recommendation.

As you know, present Sierra Club dues are \$9 a year for regular membership, \$4.50 for spouse membership, and \$3.50 for junior membership. This averages out to a dues income of approximately \$7 per year per club member. What happens to our dues money? This is the breakdown per member for 1968 as estimated by Controller Clifford Rudden:

Dues Income (68,000 members @ \$7)			\$476,000
Dues Outlay	<i>Cost per member</i>	<i>Total</i>	
Member Services			
Salaries and Related costs	\$0.48	\$ 32,600	
Maintaining membership records (includes computer costs, printing, envelopes, mail house services)	\$0.31	\$ 21,000	
Chapter allocations	\$1.06	\$ 72,000	
Council	\$0.13	\$ 8,800	
Handbook	\$0.40	\$ 26,900	
Committees (includes Library, Lodges & Lands, Mountaineering, etc.; excludes Outings and Publications)	\$0.19	\$ 12,700	
Meetings (Board and Executive Committee)	\$0.43	\$ 30,000	
Share of general overhead (accounting, telephone, insurance, taxes, etc.)	\$1.01	\$ 69,000	
Total member services	\$4.01	\$273,000	
Bulletin (including Annual)	\$3.19	\$217,000	\$490,000
Deficit (from dues): \$0.20 per member			(\$14,000)
Admission fees (\$5 per new member or family)			\$ 62,000
Balance available for external conser- vation purposes: \$0.71 per member			<u>\$ 48,000</u>

In short, your dues go for intra-club services. They go for necessary conservation outlays—to conduct the business of a large and growing conservation organization, to maintain its records, and to keep the membership informed and involved. In recent years, we have tried to streamline these services and our operating procedures. Our staff is minimal to serve a membership of almost 70,000 that continues to grow at the rate of more than 1,000 new members a month. It is hard to see where our intra-club services could be cut

back; as the table above indicates, our present dues alone do not cover them.

It should be understood that these services are concerned directly—and very largely—with the club's active conservation efforts, but they are services to our members themselves. We must also have money to carry on our conservation programs outside of the club. How do we finance the kind of vigorous local and national campaigns that paid off so handsomely in 1968's major conservation victories? To date, this money has come largely from contributions. For instance, over \$90,000 was received from generous club supporters in response to my plea of May 1968.

The revocation of our tax-deductible status by the Internal Revenue Service has predictably slowed large contributions to the club (another reason for our present financial condition). We are trying to regain our tax deductibility, and this, too, costs money. We are mounting a major fund-raising campaign through the Sierra Club Foundation for specifically tax-deductible projects. But however successful these efforts may be, we need a steady, predictable income for our conservation program to insure the carrying on of the momentum recently set into motion by the campaigns for the North Cascades, the Grand Canyon, and the redwoods.

This need for dependable conservation funds is one reason for the Board's recommendation of a dues increase. In proposing a \$3 increase, however, the Board is also taking into account the rising cost of living which can be expected in operational expenses. And it is recognizing the very real need of the chapters for more funds to increase the effectiveness of the club on the local level. (One dollar of the proposed increase is tagged exclusively for chapter use.)

In asking the membership to ratify this dues increase, the Board is reflecting the recommendation of the Sierra Club Council, which has repeatedly endorsed such a proposal. The Publications Reorganization Committee has also given priority rating to raising membership dues. In its recent report it stated:

At the current rate of growth and with continuing cost inflation, the present dues are inadequate to continue conservation activity and member services at an appropriate level. The committee recommends that higher membership dues be established by the membership and that a portion of the dues increase be allocated to chapters to increase their effectiveness at the local level.

Support for the dues increase is strong in the leadership of the club. It must, of course, be strong in the entire membership if it is to become a reality. Ours is a unique organization, a determined group of grass-roots volunteer conservationists. Despite internal difficulties, we have become the most potent activist force for conservation in the country. We must remain so. Only your support can guarantee that we will. I strongly urge you to vote for an increase in club dues. What better way to invest in a beautiful, livable environment?

EDGAR WAYBURN



Until Highway 36 was "improved" west of Kailua, the route followed contours and respected the terrain. (Note abandoned right of way in top right corner.) East of Kailua, still charmingly unimproved, the road remains a major attraction in its own right. Pictures on these pages were taken from the roadside, as was the photograph on this month's cover.

Via 36 to Keanae and Kipahulu

ROBERT WENKAM, author of *Kauai and the Park Country of Hawaii* and chairman of the club's new Hawaii Chapter, told us what to look for on Maui. He ought to know; his forthcoming exhibit format book on Maui is scheduled for publication later this year. Bob advised us to concentrate on three things: the coast highway from Kailua around to Kaupo, and two proposed additions to Haleakala National Park.

One proposed addition is a corridor from the existing national park, at the crater of 10,000-foot Haleakala, to the sea at Keanae (the downslope portion of which shows in the picture at bottom left). Some object that Hawaiians living in traditional style and cultivating taro patches at Keanae (below, right) would be displaced. Wenkam feels that park status would be Keanae's best protection against displacement by resort developers. The Hawaiian community would be a valuable feature of the park, he points out, and for that reason, should be left undisturbed.

The other proposal is a corridor to the sea at Kipahulu, which would take in magnificent upland wilderness as well as

the pastoral lowlands and shorelines shown in pictures at the bottom of the facing page. This proposal is not controversial, Wenkam reports. The Nature Conservancy is working out details with the owners of Kipahulu Ranch, whose cooperation has been exemplary.

Some local residents are working to establish a conservation reserve that would protect the entire area bordered by the park, the proposed park additions, and the sea.

Eastern Maui's coast road, Highway 36 and its continuation, Highway 31, is a delight. Stopping countless times, we seldom got our rented Datsun into top gear. Predictably, a cut-and-fill, crow-flight realignment has been proposed, but Wenkam is hopeful that the existing road can be protected by designation as a scenic parkway.

HUGH NASH

A ten-day Sierra Club outing to Maui will leave from west coast jump-off points on March 28. See outing previews in the November 1968 SCB, and watch for further details in next month's Outing Issue of the Bulletin.





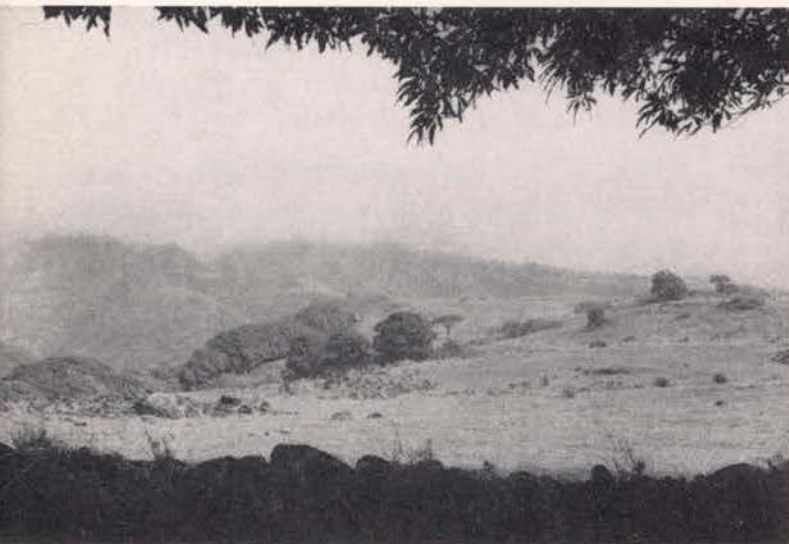
Eastern Maui's coast road has the intimate beauty of a garden path

When the road crosses a ravine, there is usually a waterfall to be seen

Wailua Stream plunges from misty heights in Hana Forest Reserve

A highland wilderness is hidden in clouds above Kipahulu Ranch

Seascapes and pastoral landscapes add to Kipahulu's park potential



Instant Roads in the National Parks

by George Alderson

NOSTALGIA FOR THE NATIONAL PARKS of 15 years ago makes a pleasant diversion from the traffic jams of today and shows the need for changes in policy to protect the parks' essential values. But nostalgia that clings to the past, blind to the future, is bound to rob the future of anything to be nostalgic about.

In its newly published *Park Road Standards*, the National Park Service recognizes the irreversible changes in park use that have put an end to the leisurely, winding, dusty roads and intimate roadside campgrounds once typical of the national parks. The Service now admits that growing numbers of park visitors are indeed a problem, and that more roads are not the solution. The need for regulation of numbers of people and how they travel is mentioned briefly. Research is already being done by the Service on alternatives to roads and private cars, ranging from buses (already the subject of a pilot project in Yosemite Valley) to monorails and tramways. The *Standards* note that existing roads can be made less of an ordeal by adopting one-way traffic systems, also tried with some success in Yosemite Valley.

"It is quite possible," the *Standards* say, "that, at this point in the history of the national parks, new roads should be considered the last resort in seeking solutions to park access." Having stated the limitations and drawbacks of roads, *Park Road Standards* endorses something called motor nature trails: "An often overlooked opportunity to disperse the traffic load and to increase visitor enjoyment is to convert existing roadbeds—such as abandoned roads and railroads, fire roads, and administrative roads—into interpretive roads or motor nature trails. Their use for this purpose is encouraged. These low-speed, often one-way roads, with ample parking, viewing, and trail opportunities, encourage visitors to explore the scenery and features at a leisurely pace."

It is understandable that the Park Service should want to give park visitors the same intimacy with the land that they could find, even by car, before the big roads came. Members of the Service speak enthusiastically of motor nature trails as places to see wildlife from a car, to drive without the crowding and rush of traffic on main roads, to slow down and see parks close-up. These purposes represent the best ideals of the Service, but good intentions are not enough. Increasing population and travel have made tourism a major industry in most park regions, and promoters are agitating not only for improvement of roads but for construction of new ones in the wilderness of the national parks. In this game the motor nature trail (or so-called interpretive road) is a pawn.

The case of Colorado National Monument is illustrative.

In March 1968, Superintendent J. M. Carpenter announced that a wilderness plan including Monument Mesa was in preparation. This was opposed by members of the Grand Junction Chamber of Commerce, who were seeking a road across Monument Mesa to Liberty Cap and its view of Grand Junction's urban clutter below. On July 7, Superintendent Carpenter abruptly announced that an existing "administrative road" to Liberty Cap would be opened to the public as a motor nature trail and that "the extent of public use could affect the ultimate decisions" on wilderness. The road's opening was approved by George B. Hartzog, Jr., Director of the National Park Service. After the road had been open for six weeks, Superintendent Carpenter told the writer that any wilderness in Colorado National Monument would not include Monument Mesa. The ease with which public travel became established—and wilderness was abandoned—indicates the danger of the interpretive road concept.

Other motor nature trails were opened during 1968 in Rocky Mountain and Grand Canyon National Parks. Park Service planners have proposed others in Great Smoky Mountains and Canyonlands National Parks and Lava Beds National Monument—within areas that citizen conservationists have recommended for protection as wilderness. Wherever old dirt roads exist, motor nature trails can be opened with a minimum of preparation. Since many back roads in the parks have been maintained for use by Park Service personnel, unlocking the gates is often enough to create an instant road.

These instant roads conflict with the orderly review of national park development implicit in the Wilderness Act. By opening an old dirt road that could have become a trail in the wilderness, the Service lets motorized traffic become established where wilderness could have been preserved. The Park Service should not preempt decisions that rest, under the Wilderness Act, with the Congress and the people of the United States.

The director of the Park Service should declare a moratorium on the opening of additional interpretive roads in all the national parks and monuments until Congress has acted on the Service's wilderness recommendations for each park. The stakes were defined by a former director of the Park Service, Newton B. Drury: "If we are going to succeed in preserving the greatness of the national parks, they must be held inviolate. They represent the last stand of primitive America. If we are going to whittle away at them we should recognize, at the very beginning, that all such whittlings are cumulative and that the end result will be mediocrity. Greatness will be gone."

The National Wildlife Refuge System

A report of the Advisory Board on Wildlife Management



Canada geese, Farmington Bay Waterfowl Refuge, Utah

A. Starker Leopold,
Chairman

Clarence M. Cottam

Ian McT. Cowan

Ira N. Gabrielson

Thomas L. Kimball

*The Advisory Board's report, begun in last month's SCB, is concluded here. Some omissions (indicated thus: ***) were necessitated by space limitations.*

THE DEMAND for pleasuring grounds in America is going up even faster than the population because of extended leisure time, higher income, and improved transportation. The National Wildlife Refuges are attracting their share of attention by the recreating American public. Nearly 14 million visitors came to the refuges in 1966 for purposes of outdoor enjoyment. The classification of visitors was as follows:

Purpose	Visits	Per cent of visits
Hunting	541,210	4
Fishing	3,777,051	27
General recreation	9,485,040	69
	<hr/> 13,803,301	<hr/> 100

In 1967 the total visits had increased to 15.6 million according to incomplete reports now available.

Questions facing refuge administrators are: How far to go in attempting to help meet this popular demand for public playgrounds; secondly, what kind of recreation should be offered on the refuge areas; and thirdly, who is going to pay the bill for the greatly increased cost of administration, service and development?

In 1962, Congress expressed its intent that the National Wildlife Refuges be used for outdoor recreation (Public Law 87-714), provided that the primary purpose of the refuges was not compromised and that the cost of the recreational

program was funded. Subsequently in 1964, the Fish and Wildlife Service issued a printed leaflet entitled "Recreational Policy on National Wildlife Refuges" which interprets and delineates the Congressional mandate. The 1964 policy is well stated and closely conforms to the concepts of recreational policy held by this Advisory Board. The problem remains, however, of interpreting the written policy into operational procedure on a given refuge.

It seemed to this Board that there is a great deal of variation throughout the refuges of the country in the manner and extent to which recreation is being developed and incorporated into operational plans. On the one hand, there are refuges maintained largely in closed status with little or no attention paid to recreational demand; the public is not encouraged to enjoy these wildlife areas, or is permitted to do so only under highly restrictive conditions. Several national refuges in the Sacramento Valley of California record only a few hundred visits by general recreationists whereas nearby state refuges attract tens of thousands who come to see the waterfowl. On the other extreme, some refuges, particularly those situated in highly populated areas of the East and Midwest have become so oriented to mass recreation that there is a question whether these areas are serving their original function as wildlife reserves. Crab Orchard Refuge in Illinois is an example, with nearly 1.5 million visits recorded in 1966. The problem facing the administrator of a refuge is one of finding a reasonable compromise between isolationism and over-use.

We concur with the policy statement of the Fish and Wildlife Service that recreation on the refuges should in all cases

be secondary to the primary purpose of management for wildlife enhancement, and under no circumstances should general recreation be permitted to interfere with this primary dedication. Moreover, the sorts of recreation appropriate on a National Wildlife Refuge should be oriented toward the appreciation, enjoyment, and in certain cases the harvesting of wildlife and fish. Hunting and fishing will be discussed subsequently. Wildlife viewing, hiking, sight-seeing, nature observation and photography can be enhanced by well-labeled self-guided tours, wildlife trails, observation points or towers, and by construction of interpretive centers and natural history exhibits. It is these types of recreation that should be emphasized on the refuge areas.

Members of the Board visited Brigantine Refuge in New Jersey and consider the facilities there an appropriate example for refuge development. A one-way loop road on a levee permits visitors to observe waterfowl and wading birds without interfering with the birds or with each other. Simple, inexpensive picnic facilities serve the 78,000 visitors that come to enjoy the natural scene.

Some of the larger game ranges and other refuges are being examined under the terms of the Wilderness Act for possible dedication to wilderness status. On the Kenai Moose Range in Alaska wilderness designation was made informally some time ago and canoe trails have been developed to en-

courage primitive forms of travel. It seems appropriate that portions of the larger refuge areas meeting the criteria for wilderness be added to the National Wilderness System so long as the refuge function is not thereby inhibited.

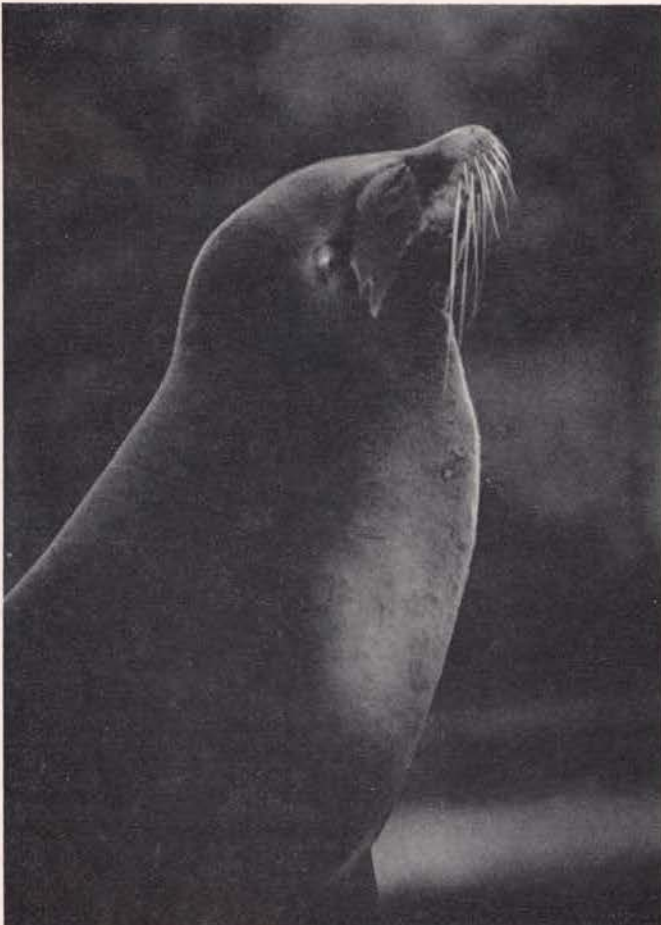
Unfortunately, the proximity of urban masses leads inevitably to pressure for larger picnic grounds, camping facilities, improved swimming beaches, motorboat marinas, water skiing, baseball fields, bridle paths, target ranges, and other assorted forms of play that are only obliquely related to refuge purposes. Once any of these forms of public use becomes established, it is difficult to terminate. Therefore the master plan for each refuge should have a firm and definite program of development for recreational programs and facilities favoring those activities appropriate to the refuge area and excluding or firmly limiting those that are inappropriate. Also included in the master plan should be a clear statement of budgetary needs to develop recreational facilities and to administer the program. Recreation cannot be allowed to draw excessively from funds intended for general refuge purposes.

The central theme of this report emphasizes the great recreational, educational, and inspirational value of the refuge system to Americans who find an interest in wildlife and natural history. But the recreation of which we speak must retain a qualitative element of naturalism. The value is gone if the refuges are permitted to become mass playgrounds.

HUNTING AND FISHING

As originally conceived, the national wildlife refuges were sanctuaries where all sport hunting was prohibited. The first departure from this policy occurred in 1924 when the Upper Mississippi River Wildlife and Fish Refuge was created, with provision for hunting and fishing. Subsequently in 1948 Congress passed the Lea Act providing for the purchase of crop lands in California to grow duck food with the idea of keeping the birds away from commercial crops. This Act also authorized public waterfowl hunting on lands so purchased. The following year Congress revised the Duck Stamp Act and provided for public waterfowl hunting on 25 per cent of any refuge in the system, if authorized by the Secretary. With the further revision of duck stamp legislation in 1958, hunting was authorized on 40 per cent of any refuge. In short, the waterfowl refuges have for a long period served a function as public shooting grounds. In an era when less and less marshland is open to public hunting, the availability of shooting privileges on portions of the larger refuges is a boon to the unattached waterfowler. In 1966 the refuge system supplied 541,000 hunting visits, an important recreational contribution.

In situations where demand for waterfowl hunting is high and daily quotas of hunters must be regulated, the function of administering public hunting, enforcing the local hunting rules, and checking hunters in and out is sometimes assumed by the state game department, as for example in California. The ultimate decision of where waterfowl hunting is to be permitted and how it should be regulated on the National



Wildlife Refuges remains with the Secretary of Interior, but cooperative administration with state officials is mutually advantageous where operational details can be worked out.

A more complex problem is the allowance of public hunting of nonmigratory game species living on refuge areas. A legal question has arisen as to the proprietary interest and regulatory responsibility of federal vs. state government in these situations. Whichever way this legal technicality is resolved, we would hope and expect that public hunting on the federal refuges will be cooperatively operated by the state and federal wildlife agencies. Legal ownership need not preclude cooperative management.

Controlled deer hunts are commonly used to regulate deer numbers. Bow and arrow deer hunters are allowed on Malheur, Aransas, and many other refuges, more with the idea of supplying some recreation than reducing deer populations. Moose, elk, caribou, mountain goats, various kinds of mountain sheep, and bears are hunted on different refuge units and game ranges. This leads logically to proposals to extend the concept of harvest to lesser species such as pheasant, quail, sage grouse, prairie chicken, sharp-tails, doves, rabbits, raccoons, opossums, coyotes, bobcats and any other species whose pursuit may furnish sport. Whereas there is no doubt of the ability of these diverse populations to absorb a regulated kill, there arises the question of whether a so-called refuge is indeed a sanctuary where the non-hunter can go to observe undisturbed wildlife. If all possible surplus populations are hunted, the refuge becomes little different from the rest of the countryside.

We take the view that the National Wildlife Refuges should be consciously developed as show places for all kinds of wildlife. All forms of disturbance, including hunting, should be so regulated in areas of visitor concentrations as to favor an optimal display of wild birds and mammals, gentle enough to be easily seen by the visiting public.

The bodies of water encompassed in the national refuge system offer some fine fishing. In 1966 3¾ million refuge visitors came to partake of this sport. On most refuges, fishing is restricted during the seasons of waterfowl use to minimize interference with nesting or wintering populations of ducks, geese, or other wildlife. By and large, fishermen respect these limitations, and within prescribed limits, fishing is a conforming use * * * As in the case of managing hunting or non-migratory game, we recommend that fishing programs on the national refuges be cooperatively regulated with state authorities.

By and large, hunting and fishing are highly significant forms of public use on the National Wildlife Refuges, to be encouraged and permitted insofar as they do not interfere with primary refuge functions. The larger the refuge, the

more liberal can be the regulations for hunting and fishing without likelihood of impinging on primary functions.

PROTECTING REFUGES FROM INVASION

However carefully refuge sites may be selected, the lands are forever subject to invasion by government agencies with higher rights of eminent domain, such as military services, Atomic Energy Commission, Corps of Engineers, Bureau of Reclamation, and the Bureau of Public Roads. After a refuge is acquired and developed, it often has to be defended.

A few examples will suffice to illustrate the problem. In 1955 the Army proposed to extend its artillery range at Fort Sill, Oklahoma, by taking over part of the Wichita Mountains Wildlife Refuge. In 1951 irrigation interests set about to drain part of Tule Lake National Wildlife Refuge in northern California to extend grain and potato agriculture in that basin. These two proposals were stopped by massive action on the part of conservation organizations. In 1960 the Alabama Highway Department, supported by the Bureau of Public Roads, designed a highway that bisected the Wheeler National Wildlife Refuge in Alabama. The road was built nearly to the refuge boundary before negotiations to transect the refuge were initiated; the crossing could have been prevented by earlier consultation with the Bureau of Sport Fisheries and Wildlife.

In 1964 the Department of Defense and the Atomic Energy Commission arranged to fire an underground atomic shot on Amchitka Island, one of the central islands in the Aleutian Islands National Wildlife Refuge and the stronghold of the northern sea otter herd. "Project Longshot" led to detonation in 1965, but instead of terminating the project the agencies followed with plans for five more atomic blasts, some possibly powerful enough to blow the side out of the island and endanger life in the adjoining seas. Amchitka has



*California sea lion, facing page,
was photographed by Colleen Flannery.
Other photos used to illustrate this report,
including the bobcat, at right,
were taken by Colleen's father, John.*

been converted from a wildlife refuge to an atomic testing ground without benefit of democratic process and over the objections of Governor Hickel of Alaska, filed in September of 1967.

There is no way in which the sanctity of refuge lands can be guaranteed other than by continuing public interest and by spirited public defense as required. Sometimes these do not suffice.

RESEARCH ON REFUGES

If, as here proposed, the national refuges become centers of management of the full spectrum of native wildlife, they logically should serve also as centers of investigation. There is advantage in continuity and long-term study on areas permanently sustained as wildlife habitat.

Just as in the case of the national parks, the refuges should be made available for legitimate field study by any qualified scientist, whatever his affiliation. University groups as well as government scientists can contribute to knowledge of a refuge and thus indirectly to better management. Some talented laymen without official trappings may help as well. Refuge administrators should do everything possible to assist and facilitate such field investigations, so long as they do not interfere with the primary refuge functions nor endanger the existence of any native species. Scientific collecting of plant and animal specimens, under proper authorization and con-

trol, should be recognized as a legitimate and important research procedure.

There has been considerable variation among refuges in the extent to which management personnel are permitted to participate in research. On some refuges all research initiative is discouraged as detracting from the management function. On others research is encouraged, which is the view that we urge be uniformly adopted. Clearly the day-to-day operations must go on, but limited time made available for serious and relevant research can yield significant information and moreover may keep many biologists content in management jobs. It may indeed sharpen their interest and increase their competence in the management job. As an outstanding example of wildlife research conducted by refuge personnel we mention the work being done on the breeding and migration of Alaskan black brant by personnel of the Clarence Rhode and Izembek refuges * * *

CANADIAN AND MEXICAN REFUGES

Recognition of the joint interest of Canada, the United States and Mexico in the welfare of migratory birds is expressed in international treaties ratified between Canada and the U.S. in 1916 and the U.S. and Mexico in 1936. To what extent does the refuge system extend north and south of the United States border?

The Canadian government has designated 15 "Migratory



Bull moose

Bird sanctuaries" in Northwest Territories. These sanctuaries, with an aggregate area of about 27 million acres, serve primarily to protect nesting populations of geese from hunting on the breeding grounds. A few ducks and some colonial birds are protected as well.

In the tier of provinces extending across southern Canada, establishment of wildlife refuges is a provincial rather than a federal prerogative. A number of provincial sanctuaries serve to protect waterfowl during the hunting season, but in general these areas are not managed nor administered on a year-round basis comparable to the federal or state refuge systems in the United States. The purpose is simply protection of migratory waterfowl from excessive shooting. There is relatively little habitat improvement undertaken.

Details of the number and distribution of provincial refuges were not available to us. However, in spite of the vast area of Canada, the relatively low human population and low gun pressure, the naturally extensive marshlands, the system of legal restrictions and of provincial and federal sanctuaries is probably inadequate at present to protect waterfowl from overshooting. Considerable evidence points to serious overshooting of mallards in Manitoba, for example. Special restrictions were added in 1967 to reduce the kill. Habitat preservation, largely for duck nesting, is a much more serious matter still not resolved.

Mexico has just started a program of bird protection through refuges, with establishment of a sanctuary on Raza Island in the Gulf of California. The island is a major nesting ground for terns and gulls, and until given protection was regularly raided by commercial egg gatherers. The Mexican government was assisted in this undertaking by the National Audubon Society.

In terms of migratory waterfowl, there is serious need in Mexico for a system of wintering refuges comparable to those in the southern United States. The interior marshlands originally scattered over the uplands from Chihuahua and Tamaulipas down to the Valley of Mexico have largely been dried up and converted to agriculture. Refuge areas might be used to restore local marshes, which with protection from hunting, could be safe and attractive concentration points for migrating birds. Along the tropical coast there is adequate marshland habitat remaining, but hunting pressure is spreading. At least some spots should be reserved for the undisturbed use of waterfowl. Scammon Lagoon in Baja California, now the gathering point for most of the Pacific black brant of the continent, would be a logical beginning point for a refuge system. There are a number of other potential sites, equally attractive. The continental program of waterfowl protection cannot be fully effective until Mexico provides protection and assured habitat for the winter visitants.

SOME QUESTIONS ABOUT THE REFUGE SYSTEM

Refuges for migratory waterfowl certainly attract and hold the birds and protect them from excessive harassment during the hunting period. In some areas they keep hungry migrants out of commercial crops. It is easy to assume, there-

fore, that the impact of refuges on ducks and geese is all good. But there remain some troublesome and puzzling questions about this impact, some of which follow:

To what extent does the present pattern of refuges alter the species mix by favoring some species over others? It seems that the stubble feeding birds profit most, by using the refuges for sanctuary and seeking feed on dry stubbles for a radius of many miles. This may explain the dominance in the continental population of mallards, pintails, and various geese, despite the fact that these are the species most sought by hunters. The traditional or compulsory marsh feeders like redhead, shoveler, wood duck, etc. do not use the refuges so effectively and probably will decrease in the long run. Aside from differential hunting regulation, is there any way to manage the little ducks more effectively?

Refuges concentrate populations of ducks and geese and change their food habits for a long, and perhaps critical period, prior to migration and reproduction. We know next to nothing about the nutritional needs of these birds, particularly the role of winter nutrition on subsequent reproduction and juvenile survival. We know too little about the possible dangers of communicable disease, such as fowl cholera, in winter populations that are clustered on refuges.

If there were no refuges where would the birds be? Would they find other protective devices as have European waterfowl that seek tidal flats to escape hunting? Would they migrate farther, or earlier? The pattern of movement certainly would be different. The refuge network in the upper Mississippi Valley has shortstopped the movement of Canada geese and created a dangerous problem of hunting regulation. This subspecies no longer visits its former winter grounds south of Illinois in large numbers. Is the balance positive, negative, or only different?

Can the refuge system be designed more effectively to protect locally decimated populations, such as, for instance the breeding mallard population of the upper Mississippi drainage or the honker and redhead populations along the eastern base of the Sierra Nevada? Is the land acquisition program thoughtfully geared to meet these local, specific protection problems? Can these problems be solved just by hunting regulation?

Unanswered questions of this sort point to the need for a continuing program of study and reappraisal of the actual functioning of the refuge system.

RECOMMENDATIONS

To sum up, we offer some specific recommendations about future development and management of the National Wildlife Refuge System.

- (1) The system of 250 migratory waterfowl refuges is still inadequate to protect the resource. Breeding grounds in particular need further safeguards, and units should be preserved by purchase or lease wherever possible. State, Canadian, provincial, and private agencies should be encouraged to extend the effectiveness of the national program of

breeding grounds preservation and restoration. Maintaining natural wetlands—vital hydrologic units of the prairie landscape essential for waterfowl production—should be a responsibility of all land and water use agencies.

(2) There is still need for some additional refuge units along the flyways and on the wintering grounds, though the priority is less than for breeding areas. New units should be selected to fill geographic gaps in the system or to strengthen weak units. An example of such a weakness is the sub-flyway paralleling the Sierra Nevada on the east, served only by the Stillwater Refuge in Nevada whose water rights have been virtually eliminated. The wintering grounds in Nevada constitute a major gap in the refuge system.

(3) We recommend continuing appraisal of the existing system of refuges, with a view to perfecting the long-range plans for land acquisition and development. The national refuges constitute an open-ended system, and units will doubtless be added and others deleted indefinitely into the future. But these adjustments should follow a systematic procedure aimed at satisfying firmly defined goals.

(4) General refuges for non-waterfowl—including islands, wildlife ranges, reserves for endangered species, bird rookeries, reserves for oceanic mammals, etc.—should expand too as opportunity and funds permit, with emphasis on rare and endangered species.

(5) Duck stamp funds alone are inadequate to finance this program of land acquisition and development. In view of the growing recreational and educational value of refuges to the general public, we suggest that use of general funds is justified to augment the tax on waterfowl hunters in extending the refuge system.

(6) There must be substantial strengthening of central administrative authority in the Division of Wildlife Refuges.

The loose structure of the administrative framework in the recent past has precluded development of the system along pre-determined lines of policy.

(7) Insofar as possible, plans for the development and management of individual refuges should include preservation or restoration of natural ecosystems along with the primary management objective. All native animals and plants should benefit by the presence of a refuge unit. This in time will add greatly to the recreational, educational and scientific value of the area. Naturalism in management is to be considered a virtue.

(8) The refuge system as a whole should be designed and managed to spread migratory waterfowl as evenly as possible throughout the flyways. Excessive concentration, such as the gathering of Canada geese at Horicon Refuge, should be avoided or rectified to reduce danger of overkill, crop predations, and epizootic disease.

(9) Refuges are for people as well as for animals, but patterns of public use must be rigorously controlled to protect the primary purpose of refuges, to emphasize natural values, and to minimize inappropriate activities. Wildlife oriented uses, such as wildlife viewing, should be an important secondary objective of every refuge.

(10) Hunting and fishing are appropriate uses for portions of many refuges. Keeping in mind the primary objectives of the refuges, both hunting and fishing along with other public activities should be managed to prevent undue disturbance of birds and mammals or interference with their welfare.

(11) The National Wildlife Refuges should be extensively used as research areas by qualified scientists and naturalists. In many localities refuges are the only land units devoted solely to wildlife preservation, and thus offer unique possibilities for continuous research.

Wilderness Conference to Convene in San Francisco, March 14-16

THE ELEVENTH BIENNIAL WILDERNESS CONFERENCE will be held at the Hilton Hotel in San Francisco on March 14, 15, and 16. Daniel B. Luten, Lecturer in Geography at the University of California, Berkeley, is chairman of the conference, whose theme will be "Wilderness, the Edge of Knowledge." The conference will discuss problems connected with the last "islands" of wilderness—the last unspoiled landscapes of earth.

Two of the four discussion sessions will be devoted to the wilderness "islands" of Alaska. The first of these sessions will examine policies concerned with the development or non-development of Alaska's vast public domain; the second will be devoted to problems that industrial development poses for Alaska's wildlife. Are huge oil fields compatible with caribou herds?

Another half-day session will focus on the role of wildlife in "islands" of wilderness around the world. The fourth ses-

sion will examine the impact of population pressures on wilderness.

Sunday's field trip will be a five-hour cruise on San Francisco Bay. The esthetic and ecological significance of the bay, its importance as open space, will be interpreted by Harold Gilliam and Georg Treichel.

Chairman Luten sees the theme of the conference as an expression of the view that the existence of wilderness—something at the far edge of knowledge—is essential to our own physical and intellectual vigor. The conference will ask itself not only whether wilderness can survive man, but also whether man could survive in a world that contained no wilderness.

GEORGE HALL

Information about speakers, reservations, fees, and other details of the conference will be published in the February issue of the Bulletin.—Ed.

Book Reviews

THE AMERICAN ENVIRONMENT: READINGS IN THE HISTORY OF CONSERVATION. Edited by Roderick Nash. 236 pages. Reading, Massachusetts: Addison-Wesley, 1968. \$2.75.

The history of the conservation movement in the United States has been a dynamic one, full of ideas and action, of continuity and change. Roderick Nash has selected 36 short readings to illustrate this history and has emphasized the attitudes of people toward their environment rather than presenting a mere chronology of events.

The selections are excellent and cover the time from the middle of the 19th Century to the present; included are Henry Thoreau, Robert Underwood Johnson, Franklin Roosevelt, and Rachel Carson. A good bibliography is provided, and Dr. Nash's own comments tie the readings together into a coherent story.

The book is of more than academic interest. As Dr. Nash says in his introduction, "In attempting to 'sell' conservation policies today, it is especially important to know something of the national taste in environment. Such information is perhaps best derived from an examination of how this taste was formed."

In what direction is conservation going today, and why? Is there a rationale for conservation? What are our goals, and how do we best pursue them? If today's conservation is the concern for environmental quality which it seems to be, will the Sierra Club become more involved with Diablo Canyons and "ugliness" and less with Glen Canyons and wilderness? This book goes a long way in helping us think about such questions and about the nature of conservation itself.

TOM VALE

THE MOUNTAIN WORLD, 1966-67. English version edited by Malcom Barnes. Illustrated. 228 pages. Chicago: Rand McNally and Company, 1968. \$7.95.

For those interested in climbing, the new issue of *The Mountain World* is an almanac of events during 1965-66. This is the ninth volume of the annual which, taken together, constitute a kind of history of climbing and exploration among the world's great mountains. From Greenland to the Antarctic, from the Andes to Tibet, the scope of this issue is truly global. Among the articles are an excellent account by Onishtchenko of climbing in Russia, a look at Richard Turner's visit to an unexplored region of Bhutan, Malcolm Slessor's survey of the climbing possibilities of Brazil's mountains, an American expedition to Antarctica, and the ascent of Everest by nine Indian climbers.

This issue marks several new trends in the chronicles of climbing. First, there is included Dougal Haston's impressionistic account of the Eiger "Diretissimo." This type of account is beginning to appear more frequently in climbing

literature and is a valuable addendum to the technical report of a climb, for it takes up where the technical account leaves off and gets "into" the climb in a way impossible through the more traditional form.

Another trend apparent in *The Mountain World* is the amount of space given over to less dramatic climbs. Along with the Indian ascent of Everest are accounts of the deflowering of more modest peaks such as Augsburg Spitz (8,660 feet) in the Staunings Alps and of rock-climbing in Brazil.

This is a valuable addition to any mountaineering library.

ROBERT L. YODER

WATER RESOURCES MANAGEMENT AND PUBLIC POLICY. Edited by Thomas H. Campbell and Robert O. Sylvester. 253 pages. Seattle and London: University of Washington, 1968. \$9.50.

The 15 articles in this book, originally presented at seminars at the University of Washington's Graduate School of Public Affairs, deal with factors and policies involved in the development and use of water, mainly in the western states. The writing is non-technical and the material will be useful and interesting to those concerned with western water development.

Many policy decisions, agreements, and eventual compromises remain to be made concerning water management in the water-short west. Water development has been largely an instrument of social policy rather than a profit-making operation. The development of water by public agencies (only three percent has been developed by profit-seeking firms) was aimed at the settling and populating of the west by creating family-sized farms, and immediate economic efficiency was hardly considered.

Now that the family farm has declined economically and as a part of the American dream, the competition for the remaining water is intense, and benefit-cost ratios are being studied closely. Is it economic to transport water great distances to supplement inadequate or diminishing local supplies if the water will produce as much per acre where it is? Eventually, decisions will have to be based on a combination of benefit-cost analyses that reveal the true amount of subsidy, and a weighing of social desirability.

Problems of water quality will restrict development of the total water available sooner in the west than in the east. The eutrophication, or overfertilization with sewage, of recreational lakes such as Lake Washington and Lake Tahoe can be handled, but the increase in salts consequent upon use for irrigation creates almost insoluble problems in parts of some drainages.

Not the least of the problems is that of remodeling the law, the democratic mode of arbitrating disputes. The law, handicapped by precedents that ignore the hydrologic cycle, is required to deal with rapidly changing social priorities and standards of quality.

The book gives little attention to the growing importance

that public opinion is assigning to the recreational and aesthetic values of water, which in many places will eventually be the over-riding value.
EUGENE H. WALKER

RUSHTON AND HIS TIMES IN AMERICAN CANOEING. By Atwood Manley with Paul F. Jamieson. Illustrated. 203 pages. Syracuse: Syracuse University Press, Adirondack Museum Book, 1968. \$14.

What Stradivarius was to the violin in musical circles, J. Henry Rushton was to the canoe of the sporting world of America from 1880 into the early 1900's. Specimens of his carefully handcrafted work made in Canton, New York, are now found only in museums. His canoes were named to identify their particular make, weight, and use. These included the Arkansas Traveler, Canadian models similar to the birch bark kind used by Canadian Indians, and sailing canoes as well as sporting boats.

That Rushton's canoes were seaworthy is proven from records of a 3300-mile trip from Lake George, New York, to Pensacola, Florida. The route went via the Erie Canal, the Allegheny, the Ohio, the Mississippi River, and the Gulf Coast. His customers included sportsmen from England, France, and Australia.

Illustrations and drawings of Rushton construction methods are included in the book along with a delightful collection of group pictures of early day members of the American Canoeing Society. He was one of the 23 original members of the club which was founded in 1880.

World War I brought an end to the handcrafted business carried on by a son, Harry, after his father's death in 1906. In 1926 the factory was sold and the building demolished by a farmer who used the lumber to build a dairy barn.

L. K. SAWYER

MENDEL CENTENARY: GENETICS, DEVELOPMENT AND EVOLUTION. Edited by Roland M. Nardone. Illustrated. 174 pages. Washington, D.C.: Catholic University Press, 1968. \$6.50, paperback \$3.95.

Mendel's epochal studies in inheritance were conducted from 1856 through 1863 and published in 1866, yet it took thirty-five years before they were understood—sixteen years after Mendel's death. Never before has such a classic work in science been ignored so long. Here was the key to Darwin's theory of evolution, published just six years earlier.

Biologists have not wasted a moment in the meantime. In these proceedings, a symposium held at the Catholic University of America in 1965, six papers are presented on the advances in genetics since 1901 along with a fine piece on Mendel and his era. A translation of Mendel's *Experiments in Plant Hybridization* is appended.

Readers should not let the somewhat complex tables and illustrations scare them off. With one or two exceptions, the papers will be clear to the layman. Anyone interested in the advances in genetics and the studies in evolution should find

this collection a comprehensive review of the highlights of the last sixty-five years.
KENNETH DANIELS

THE DICTIONARY OF THE BIOLOGICAL SCIENCES. By Peter Gray. 602 pages. New York: Reinhold, 1967. \$14.75.

In the delightful preface Dr. Gray notes that in compiling a dictionary you end your researches with "about 45,000 cards, a completely frayed nervous system, and a deep doubt as to whether it is worth continuing which conflicts with a feeling that you are too deeply enmeshed to be able to escape."

Whoever has the opportunity to use this dictionary will have no doubts about its worth. Dr. Gray has produced what should be for everyone a very useful reference work and, for dictionary readers in particular, a delightful exercise.

The author of the *Encyclopedia of the Biological Sciences* turned lexicographer has done a superb job of selecting and defining an immense and up to date list of biological terms. The definitions are concise and well written, though perhaps some may find them a little too technical. Included are taxa, vernacular names of organisms, descriptive terms, roots and personal names in general usage. Very specialized technical terms have been dropped.
K.D.



"THAT'S CALLED FOULING ONE'S OWN NEST."

Courtesy of Bill Mauldin and the Chicago Sun-Times

(continued from page 4)

mists, hydrologists, and geologists have expressed opposition to the dam on the grounds that it is economically unsound, that there is insufficient water in the Eel to maintain the project, and that, because of land instability, Dos Rios is a dangerous site for the 730-foot-high earth dam. Furthermore, according to officials of the Save the Eel River Association, a recent exhaustive report prepared by the California Department of Water Resources shows that new studies have indicated that Southern California needs are now less than had been anticipated, and that there are other better and far cheaper sources of water for Southern California than importing water from the north coast. Conservationists are writing to Governor Reagan urging him to refuse state approval, thus automatically killing the project, or to at least order comprehensive studies and public hearings on all water projects planned for the north coast before proceeding on any of them.

Battle ahead on canyon road in Anza-Borrego

The California Park and Recreation Commission is expected to decide sometime in January on a long proposed road from Borrego Springs across Anza-Borrego Desert State Park to Riverside County. Plans call for the road to go through the park's Coyote Canyon which once served as the route for Juan Bautista de Anza in his two marches from Yuma to San Francisco in 1774 and 1775. Today Coyote Creek remains an unspoiled desert wilderness. Proponents of the road argue that it will provide quicker shipment of perishable produce to several Southern California communities as well as faster driving time from Los Angeles to the Salton Sea. The road's opponents state that economic and driving time benefits cannot compare with the recreational rewards to be realized by hundreds of thousands of people for generations to come, if Coyote Canyon is left undisturbed. Conservationists in the San Diego area report that commercial interests have initiated a state-wide petition drive in support of the road and are prepared to go to the governor to overrule the Park and Recreation Commission should the road proposal be turned down.

Arizona BLM lands classified as Primitive Areas

Paria Canyon and Aravaipa Canyon are the first public domain lands under the administration of the Bureau of Land Management to be classified as Primitive Areas. The 25-mile-long segment of Paria Canyon between the Arizona and Utah State line and the Colorado River will be designated as the Paria Canyon Primitive Area. This narrow red rock canyon gorge has scenic, recreational, archeological, and wilderness values and will be managed to protect its wilderness characteristics. The newly designated Aravaipa Canyon Primitive Area covers a 10-mile-long segment of Aravaipa Canyon. Here a stream, colorful rock formations, luxuriant vegetation, and varied and abundant wildlife create an environment very much in contrast to the surrounding desert terrain. The Aravaipa Canyon Primitive Area also will be managed to protect its wilderness

characteristics. A third area, classified at the same time, is the Vermillion Cliffs Natural Area. The colorful Vermillion Cliffs rise 1,800 feet above U.S. Highway 89A and are an outstanding scenic resource along a principal route of travel to the North Rim of the Grand Canyon. The new Natural Area will be managed to protect the scenic characteristics of the escarpment.

National parks to cut service this winter

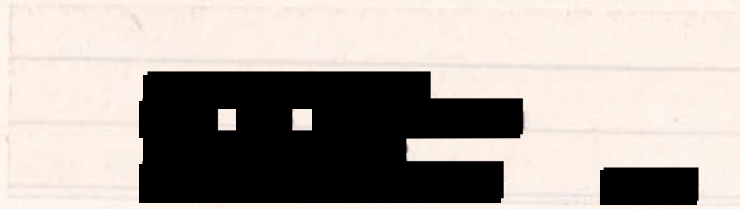
Personnel cuts brought on by the federal economy drive have forced the National Park Service to cut back on its services to the public during the winter months. For instance, this winter 23 of the 36 NPS areas in the seven states of the Western Region will operate visitor and information centers eight hours a day for five days of the week instead of the usual seven days. Parks in the mountains will economize by reducing plowing of roads normally kept open all winter. These roads and other park roads which are usually closed during the winter will be opened later in the spring. Some of the year-round campgrounds will be closed down. The NPS hopes to provide complete visitor services for a full seven-day week during the 1969 summer travel season.

Seven nominated by petition for Sierra Club Board

In addition to the eight candidates for the Sierra Club Board of Directors nominated by the Nominating Committee, seven other Sierra Club members have been nominated by petition. According to the final report of the Nominating Committee, Committee nominees are: Nicholas B. Clinch; August Frugé; Charles Huestis; Maynard Munger, Jr.; Raymond J. Sherwin; David Sive; Sanford S. Tepfer; and Edgar Wayburn; and candidates by petition are: Ansel Adams; George Alderson; David R. Brower; Pauline Dyer; Frederick Eissler; Kurt H. Munchheimer; and Virginia Prentice. Five of these 15 candidates will be chosen as directors in the April election. At the same time ballots are mailed, members will receive detailed information concerning the prior experience of these candidates and statements by the candidates themselves concerning the present and future of the Sierra Club. (The complete report of the Nominating Committee will be run in the February Bulletin.)

Brower to offer resignation to Board in May

David Brower has accepted nomination by petition as a candidate for election to the Board of Directors and has announced that he will offer his resignation as Executive Director in May. "Whether or not elected," Brower wrote the club Secretary, "I shall submit my resignation as Executive Director at the organization meeting of the new Board. If a substantial number of those candidates are elected who have been advocating that the club diminish its program, that resignation will be final. I hope the members will support those directors and candidates who have led in the forward-moving program of the club and wish it to go on."



Washington Report

by W. Lloyd Tupling

THE TRAIL AHEAD cannot be judged by looking over one's shoulder at the ground covered, but sometimes a retrospective look does help you take the measure of future problems. Thus, a glance at the last eight years of conservation history on the national scene seems in order as the Nixon Administration takes over.

Since John F. Kennedy took the presidential oath in January of 1961, approximately ten million acres have moved into wilderness status to be preserved in a primitive state, essentially closed to commercial use. During the same period, another 4,700,000 acres was added to the National Park System. The total protected is roughly equal in area to the states of Hawaii, New Hampshire, and New Jersey—a significant amount.

These gains were realized because President Kennedy and President Johnson gave more than lip service to the cause. They gave direction to federal agencies and support to their secretaries of Interior and Agriculture. As one looks back, a major factor in conservation accomplishment was that Stewart Udall was Secretary of the Interior and Orville Freeman was Secretary of Agriculture during the entire period. If these two men had not been motivated by concepts that recognize the value of untrammelled nature—perhaps in varying degrees—it is doubtful that nearly 15 million acres of land could have won protection during an era of enthusiastic resource consumption. In different ways, Udall and Freeman articulated the philosophy that something should be left for the future. They also had a knack for reaching accommodations between themselves, establishing a rapport that was frequently absent among their predecessors.

It is well to remember, too, that the rate of progress was slow at the beginning. In the first two years of the Kennedy Administration, there was much orchestration but little forward movement. Cape Cod National Seashore was authorized and became the first major addition to the National Park System in nearly a decade. Work was begun on the National Wilderness Preservation Act and the Land and Water Conservation Fund.

Also during the period of Mr. Udall's secretaryship, the Bureau of Outdoor Recreation was given statutory authority; the Land and Water Conservation Fund was enacted and

expanded; a unique management concept came into being with the Ozark National River; besides Cape Cod, national seashores were established at Assateague, Cape Lookout, Pictured Rock, Padre Island, and Point Reyes; a national lakeshore was established at Indiana Dunes; national recreation areas were created at Lake Mead, Delaware Water Gap, Whiskeytown-Shasta-Trinity, and Bighorn Canyon; Redwood, North Cascades, and Guadalupe Mountains national parks were added to the National Park System; innovations in scenic resource protection were embodied in the National Scenic Rivers Act and the National Trails Act.

Men of the outgoing administration leave a proud legacy.

Much has been done in the past eight years, but it does not necessarily follow that equivalent results can be attained in the next eight. Regardless of the resource philosophies of the men Mr. Nixon selected to head the Interior and Agriculture departments — Governor Walter J. Hickel of Alaska and Dr. Clifford M. Hardin, chancellor of the University of Nebraska — it can be argued that the days of "easy pickings" in resource preservation are over. A lengthy period of sustained effort is almost inevitably followed by a letdown.

But more to the point, there is abundant evidence in Washington that powerful groups representing industries based on the consumptive use of natural resources are prepared to mount major offensives in the months ahead. The exploiters see withdrawals of land for parks and recreation as a threat to their plans to step up logging and mining activity on public lands. One industry memorandum outlines a program to enlarge the allowable cut in national forests, particularly in the West. "Favorable public opinion is a prerequisite for getting more timber from federal lands," it concludes. "Both Congress and the federal administrative agencies have been influenced by public opinion against cutting trees. The need for timber to meet home building needs must be publicized to overcome anti-timber cutting sentiments."

It is apparent that no matter how friendly the next administration may be, the road ahead will be difficult for those who want to leave something untouched by the imprint of man — more difficult, perhaps, because so much has recently been achieved.