

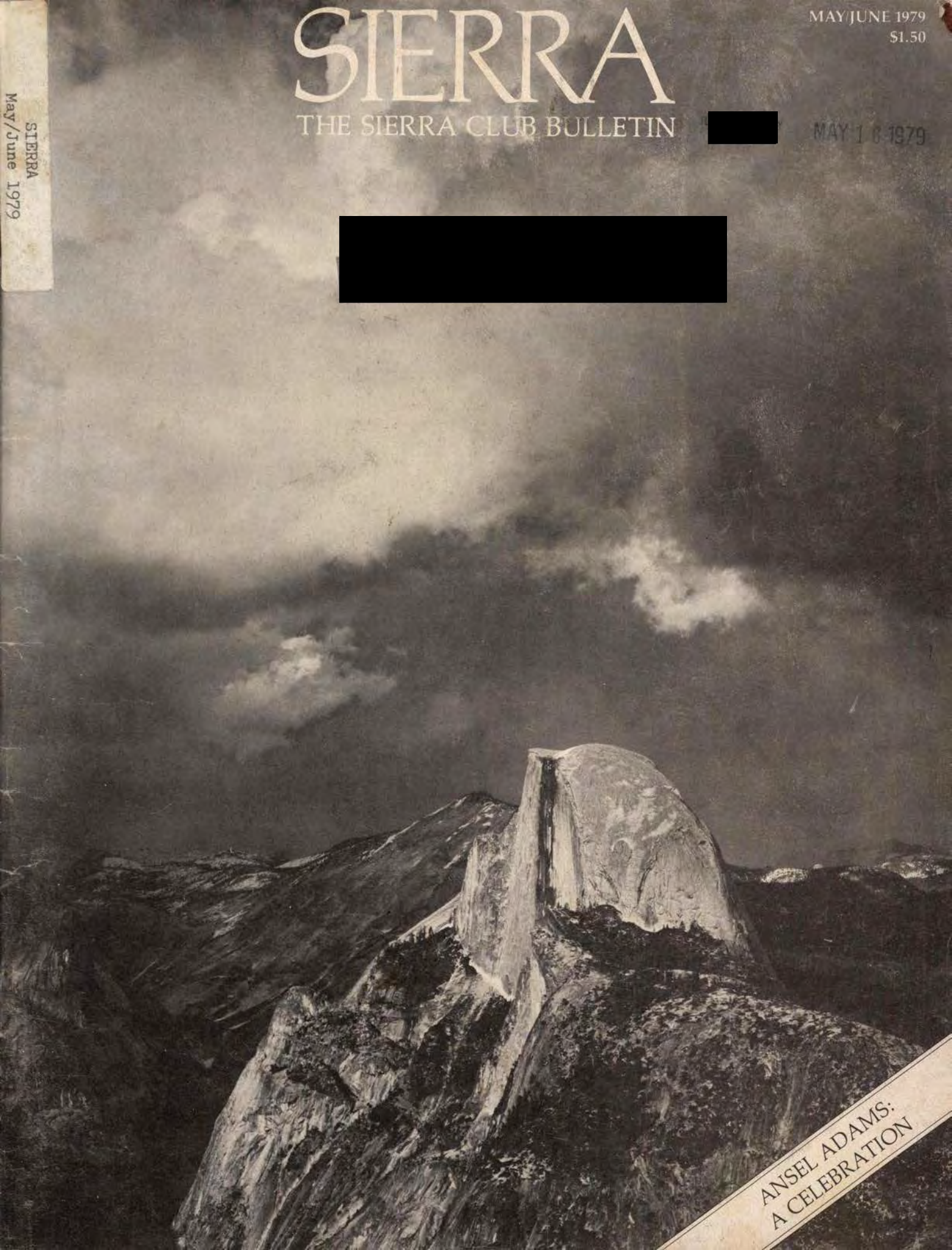
# SIERRA

THE SIERRA CLUB BULLETIN

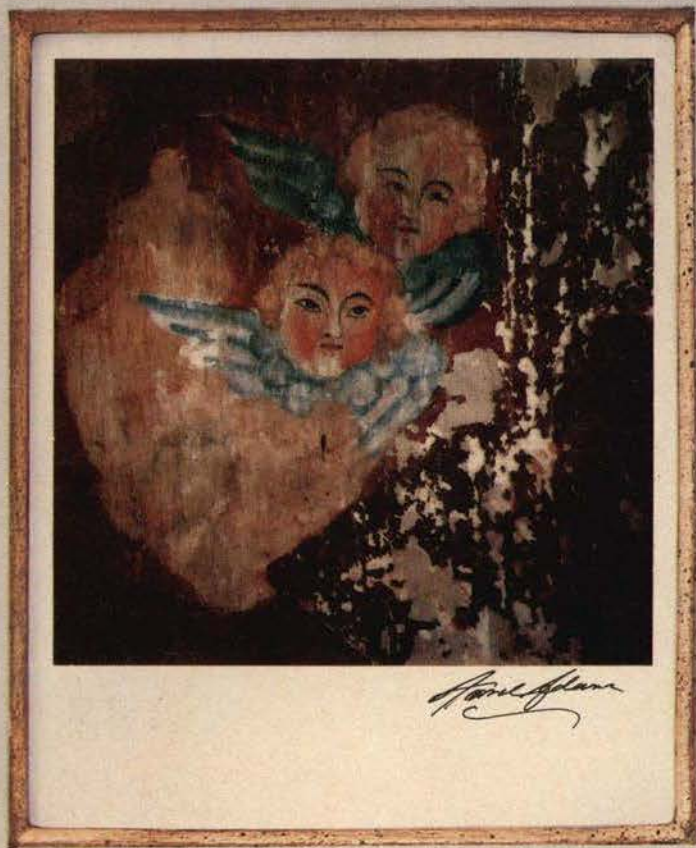
MAY/JUNE 1979  
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SIERRA  
May/June 1979



ANSEL ADAMS:  
A CELEBRATION



Ansel Adams made the image, "Cherubs, Mission San Xavier del Bac." It was exhibited at an Adams retrospective at New York's Light Gallery. Adams used the finest instant photographic system available: Polaroid's SX-70 Land camera, the world's only folding single-lens reflex camera, and SX-70 film. This system is used by millions of photographers everywhere. With its unique metallized dyes, SX-70 film has the qualities important to photographers: vivid colors, sharp detail and permanence. Polaroid instant photography, selected by Ansel Adams for the expression of his art.

**This  
Polaroid  
SX-70  
photograph  
by Ansel  
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was exhibited  
at a major  
New York  
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Colorado.

# CAMP 7



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

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# SIERRA

## THE SIERRA CLUB BULLETIN

MAY/JUNE 1979

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Cover: *Half Dome, Yosemite National Park. Photograph by Ansel Adams.*



## Preserving Farmland

In the January/February *Sierra* guest opinion ("Preserving Agricultural Land"), William Scheller stated: "Massachusetts' is the only such project that will be tested statewide." However, not reluctant to follow her sister state's good example, in 1978 Connecticut also adopted a statewide program for preservation of farmland by purchasing development rights. Using regulations based upon Massachusetts' and Suffolk County, Long Island's experience, the Connecticut legislature authorized \$5,000,000 for its pilot program.

Purchase of the development rights to eight to twelve farms is anticipated within the next six months. With over 100 applications on file, the Connecticut General Assembly has already drafted legislation this year to increase the bond authorization by an additional \$10,000,000.

As a sponsor of this bill during my four years in the Connecticut General Assembly, I am delighted with the support that farmers have given it, and I am especially hopeful that it will enable young men and women to afford a career in farming.

Dorothy S. McCluskey  
Connecticut State Representative

## New Journal

The John Muir Institute for Environmental Studies, in cooperation with the University of New Mexico, began quarterly publication of a new philosophy journal called *Environmental Ethics: An Interdisciplinary Journal Dedicated to the Philosophical Aspects of Environmental Problems* in January 1979. Institutional subscriptions are \$20; individual subscriptions are \$15, and single copies may be purchased for \$5. These rates apply anywhere in the world.

All correspondence should be addressed to the editor, *Environmental Ethics*, Department of Philosophy, University of New Mexico, Albuquerque, NM 87131; telephone (505) 277-4043.

Eugene C. Hargrove, Editor  
Environmental Ethics

## Avalanche!

Lawrence Ladin's article about the attempted revival of an avalanche victim ("Avalanche!" January/February) points out the necessity for proper training in first aid and cardiopulmonary resuscitation (CPR), especially for those heading into the back country. Unfortunately, it seems none of the people in the ski party discussed in the article had CPR training; the technique for artificial blood-circulation employed in the rescue attempt could not help the victim. Repeated thumps over the heart will not circulate blood, even when proper mouth-to-mouth resuscitation is oxygenating blood in the lungs. A single precordial thump was once used as a first-aid technique when the rescue was begun within 60 seconds of the cardiac arrest, but the disadvantages of this method outweigh the advantages, and it is no longer included in Red Cross CPR training. Successful artificial blood-circulation requires instead regular, smooth chest compressions applied unceasingly. Artificial breathing through a mouth-to-mouth or mouth-to-nose technique is interposed with the compressions. CPR training usually requires only four hours and is often provided at no cost by adult education programs, community colleges, or local fire or police departments.

Terry R. Armstrong  
Palo Alto, California

The fatal accident described in "Avalanche!" (by Lawrence Ladin, January/February) is most disturbing, for it seems probable the accident could have been avoided had the guiding organization conducted itself in a professional manner. On the other hand, I found your editorial comments preceding the article to be somewhat misleading. I have done a good deal of high-mountain touring in the main chain of the Alps, often with outstanding guides from Chamonix and Saas-Fee. I have also toured, to a much more limited extent, in the Canadian Rockies. While I fully agree that the

danger from avalanches can be minimized, I think your readers should realize that it cannot be eliminated. A guarantee that a trip is free of avalanche danger would either be fraudulent or would pertain to an outing confined to major valleys and thus not a high-mountain ski tour.

Kurt Gottfried  
Ithaca, New York

## Lobbying Congress

As a volunteer lobbyist in the Club's Sacramento office for some years, I read with interest Brock Evans' article on lobbying the Congress ("Lobbying: A Question of Resources," October/November/December). I don't envy those whose job it is to prod Congress into action; it is probably more ponderous than any of our state legislatures.

Yet Evans and company must be doing something right. A *Wall Street Journal* article recently designated the environmental lobby as one of the three most effective—right up there with the labor and gun lobbies.

Bill Collins  
Chairman, Northern California  
Wildlife Committee

## Thanks to Chapter Chairman

We in central Texas, because of our good quality limestone and excellent weather, have had several cement plants plan to locate here. When one multi-billion-dollar cement company wanted a construction permit to build what we thought was a dirty, polluting plant, we appealed to the Austin group of the Sierra Club.

Ken Manning, the local chairman, masterfully led the fight against this giant conglomerate, along with other concerned citizens. I would like to publicly express my thanks and deep appreciation to Mr. Manning, who gave freely of his time, energy and counsel. It is wonderful to know that people still care.

Herbert Piller  
Concerned Citizens of Central Texas  
Georgetown, Texas

If you took a photograph this great,  
where would you get a print this good?



Photography by Ozzie Sweet

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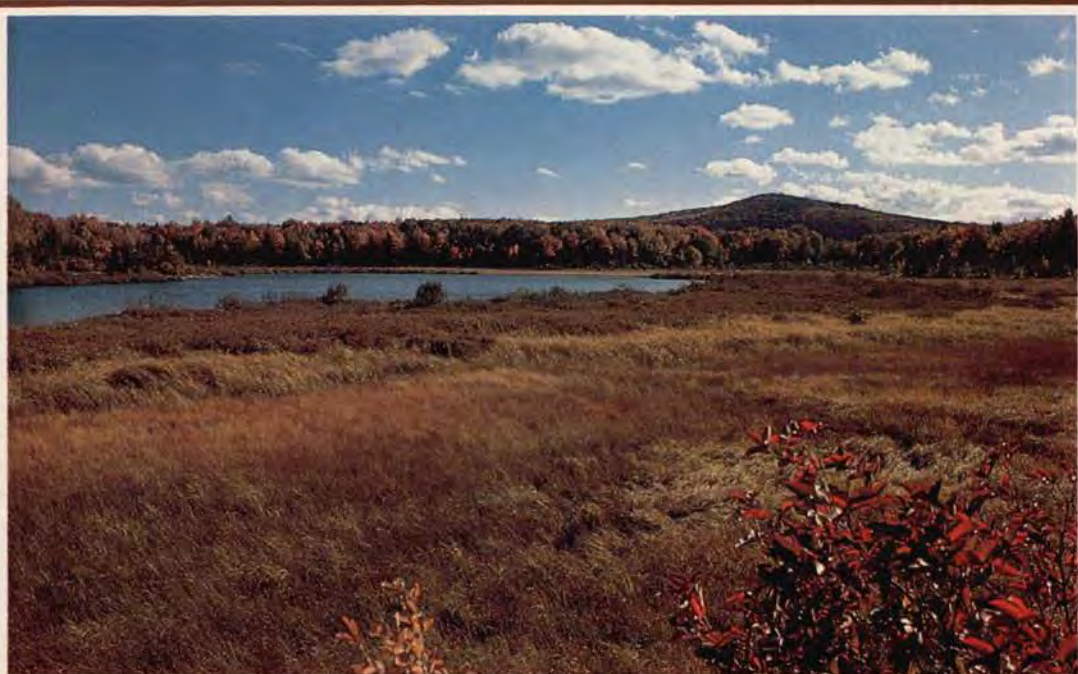
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In the Forest Service Proposal,  
You Can't See the Trees for the Computers

# The Flaws of RARE II

HUEY D. JOHNSON

Peter B. Smith



Fifield Pond in Wilder Mountain roadless area, in Vermont's Green Mountain National Forest. No areas in Vermont received wilderness recommendation from the Forest Service.

The RARE II controversy has reached its final administrative stage. The Forest Service completed its review of roadless areas and, through the Department of Agriculture, released its preliminary proposals in January. Next, other agencies and states commented on the proposals, and the Carter Administration released the final RARE II recommendations in mid-April. Environmentalists were disappointed with them. Now the focus of action for national forest wilderness shifts once again to Capitol Hill. Congress will consider the proposals for wilderness and for other land uses. In the Senate, the RARE II proposals will be considered by the Committee on Energy and Natural Resources. In the House, RARE II will be handled by the Interior Committee's subcommittee on public lands, under its new chairman, Representative John F. Seiberling (D-Ohio).

In March, the Seiberling subcommittee began briefings and hearings on the overall RARE II process and the Forest Service's preliminary proposals. The first witness who did not work for the Department of Agriculture or the Forest Service was California's Resources Secretary, Huey D. Johnson. His testimony presented the State of California's disagreements with the specific RARE II proposals for that state and also emphasized misgivings about the basic decision-making process—concerns that are widely shared across the country. Here, in a modified form, is what Secretary Johnson told the subcommittee.

—The Editor

“The U.S. Forest Service should think in terms of generations if not of centuries. But continuing pressure from lumbermen, mining companies, and enterprising recreational developers makes it hard for Forest Service officials to think beyond the day's schedule of appointments. The result is a built-in bias in favor of early utilization, which shows in the recommendations the Forest Service has just drawn up for classifying some 62 million acres of undeveloped land in the national forests.”

California's position on RARE II is stated in the above quote from an editorial in the January 29, 1979, *Business Week*. Although Californians are concerned with maintaining healthy timber, mining and energy-producing industries, we are also concerned with the entire scope of resource management and the need for open space and public recreation.

The *Christian Science Monitor* editorial of January 8, 1979, also accurately assessed the situation:

“They [the recommendations] would designate only 15 million acres as wilderness and 11 million for future study, while opening 36 million for various kinds of development. There are strong arguments for at least reversing these proportions, designating sufficient wilderness areas besides barren ice and rock, and being sure possibilities are not overlooked for both preserving wilderness and attaining necessary development.”



As the final arbiter for these wilderness decisions, Congress must act as the judge when citizen groups dispute Forest Service proposals for nonwilderness. In the aftermath of the preliminary proposals, there is still great controversy over many areas. Congress will need to do much more than "fine tune" the Forest Service's plan.

But what criteria should Congress use to make these decisions? Many advocates of nonwilderness have suggested that the economic needs of the nation must come first. Some of the key issues in RARE II are related to economics—but to an outmoded conception of economics. James Reston once said that there are dogmas and creeds and practices ideally suited to one age but disastrous in another. There is a new factor today in the economics of resources. I call it "livability." This factor is a measure of the quality of living that we share as population pressures grow and shortages increase. The preservation of wilderness is essential to "livability."

Each citizen, as owner of 2.7 acres of federal land, has a right to expect what has not been previously required—good management of this land and a land ethic based on sensitive appreciation of the real values of renewable resources, on professional integrity and on holistic management. The philosophic approach of RARE II, however, is based on outmoded ideals, and its management approach is also badly flawed. We have the opportunity now to challenge this program.

As a planning exercise, RARE II is a failure; few if any people are satisfied with it. The process itself had three main flaws. It was biased towards industry; its use of computerized data was ill-conceived and inflexible; and it did not permit enough public participation.

The bias towards industry was evident in the big rush to make all the decisions as quickly as possible, and in the push to allocate as many areas as possible to either wilderness or nonwilderness—whether adequate information existed or not. It is clear that the RARE II process was intended to find reasons to *not* designate areas as wilderness.

Also, the process relied too heavily on computer technology. I am not opposed to computers, but there are important human issues and values that computers cannot handle. Computers are controlled by programmers, and this process was rigged to support "business as usual." Moreover, the substitution of computer programs for public involvement undermines the very essence of democracy.

The computer process not only displaced human participation, it also resulted in inadequate data and confusing information. In its rush to finish the massive RARE II program, which involved 330 individual areas in California and a total of 1449 areas nationally, the Forest Service did not collect any new data by actual, on-the-ground study of roadless areas. Whatever data were already in hand—however old or possibly inaccurate—were simply incorporated into the computer analysis and uniformly assumed to be correct. For the most part the actual data were then replaced by numerical scales and indexes intended to measure and compare such factors as "wilderness attributes," "development opportunity" and "resource values." The following paragraph, from the draft Environmental Impact Statement covering RARE II, attempts to explain how the Forest Service used these abstractions to help

decide whether each roadless area should become wilderness or nonwilderness.

"The physical and biological factors were evaluated using a matrix of management activities on one axis and physical and biological elements on the other axis. Relative values ranging from a -5 to a +5 were then assigned in the matrix through full discussion of the interdisciplinary team. After the values were assigned for each element, the columns were totalled vertically and horizontally, ignoring the algebraic sign."

The results are indefensible third-generation abstractions that bear no relation to the real value and resources of individual land areas. Yet these were the data upon which the state and the public were asked to base their comments.

Compare this abstraction and confusion with the detailed information available to the public and to Congress through the long-established "wilderness study" process, which involves gathering data in the field in order to make detailed assessments of individual areas. This step is followed by local public hearings and then by a detailed report to Congress, which makes the final wilderness designation.

It was not possible to ascertain from the RARE II process and its supporting documentation what the resource management considerations were. It was also impossible to determine the economic implications of individual recommendations or alternatives. In its headlong rush to finish RARE II, the Forest Service applied economic models ill-suited to their use. The input-output (I-O) economic modeling

technique used is, at best, only a crude first approximation of the economic effects of major changes that might be caused by RARE II. When combined with a weak data base, the failure to account for either short- or long-term adjustments in local economies (such as shifts from wilderness to recreation), and the problems of aggregating local I-O results, it is an unsatisfactory technique.

The Forest Service argues in its defense that it has reams of backup data for each small summary it produced for the individual roadless areas. But the backup data are not among the Forest Service documents that are readily accessible to the public. The backup data can only be obtained with considerable effort by seeking out Forest Service personnel and searching Forest Service files. This process imposes unreasonable burdens on the public.

The RARE II process did not provide for public consideration of alternative boundary locations in most areas. In fact, in Oregon and Washington no potential compromise boundaries had even been explored by the end of the public comment period. This is an important point, since refinements of boundaries can often reduce economic conflicts and can result in broad consensus on final wilderness proposals. In failing to provide these alternatives, RARE II exacerbated public conflict instead of promoting consensus, as it was intended to do.

The third major defect of the RARE II process was its failure to provide for adequate public participation. The Forest Service chose to have no public meetings or hearings where citizens could comment or obtain information. Instead, it held open-house sessions in its various district offices, located in national forests. This approach clearly prejudices input because only



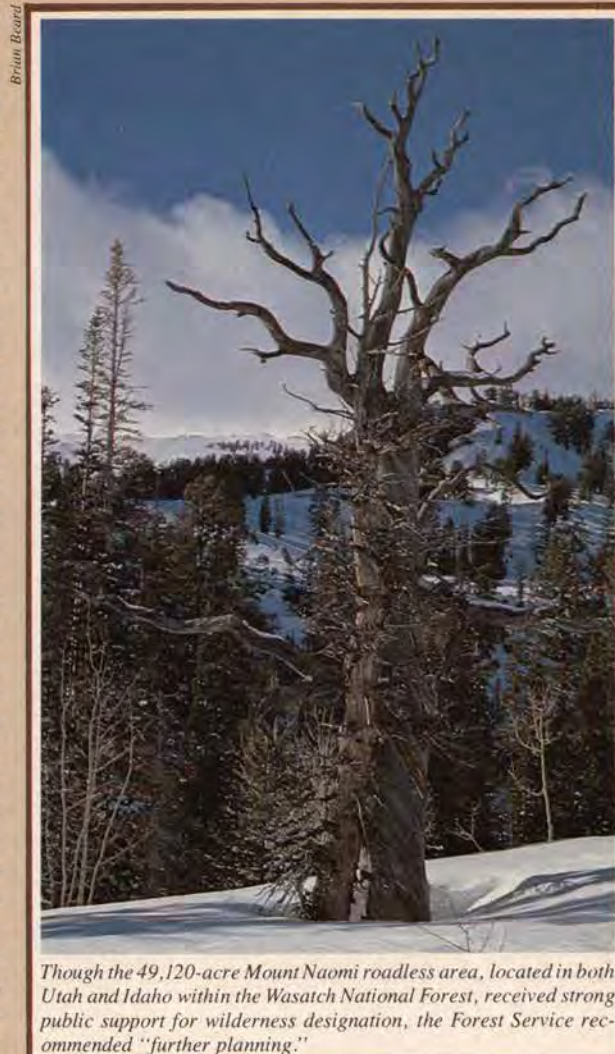
John A. McComb

Huey D. Johnson testifying before the Interior Committee's subcommittee on public lands

those living near the forests could conveniently attend. City residents found it difficult to travel the many miles to those Forest Service offices—and 90% of California's 23 million people live in major metropolitan areas.

What minimal public participation was permitted was also eventually made less valid. The Forest Service at first indicated that personal letters commenting with detailed reasons on specific areas would be given more consideration than form letters or petitions. But the service apparently changed its policy toward evaluating form letters. Detailed examination of the correspondence received by the Forest Service shows that it must have given equal weight to form letters and petitions to have drawn the conclusions it did. Public-interest groups expressed concern about this possibility months before, when the recommendations came out in January and the effect of the midstream rule-change became apparent. Since then, the California governor's office has been deluged by employer-prepared, employee-submitted form letters opposing wilderness.

An inadequate process is sure to produce inadequate results. An excellent example of this was the Forest Service's handling of RARE II decisions in northern California's rural Trinity County. Residents and citizen groups representing both state and national interests recognized early in the process the inadequacy of the Forest Service data—and the importance of properly allocating the 300,000-plus acres of RARE II lands in the county. As a result the county formed a citizens' group to represent the wide variety of local interests: timber, recreation, real estate, the local fishery, and wilderness advocates. This group developed additional information about the county's resources and, after considerable give-and-take, formulated final recommendations that were supported by all of the group's members. These recommendations, in turn, were endorsed by a unanimous vote of the county's board of supervisors and by the state. This is the kind of process the Forest Service should have employed instead of its computer-oriented program.



*Though the 49,120-acre Mount Naomi roadless area, located in both Utah and Idaho within the Wasatch National Forest, received strong public support for wilderness designation, the Forest Service recommended "further planning."*

It is instructive to compare the Forest Service's recommendations with those of Trinity County residents (see below).

A proper approach would start with the objective of producing the greatest possible returns to society in perpetuity, not simply the immediate profits of cutting, digging or drilling. All resources should be considered—timber, fisheries, watershed protection, mineral production, geothermal and wind energy, wilderness—not merely those that can be sold. Many kinds of resources received either inadequate or no consideration in the Forest Service process.

A combination of tradition and the pressure to provide wood products has contributed to the Forest Service's preoccupation with financial rather than resource management. The agency seems to measure its contribution to the nation by its budgetary position, and it takes considerable pride in the fact that its timber sales and other receipts from public lands are substantially greater than the budget allocation it receives. Is this really profit? Does it help the discussion at all? I think not. The Forest Service spends far too little for reforestation and other ac-

tivities that could enhance the long-term productivity of the lands it administers.

In California, for example, the Forest Service estimates it has a backlog of 124,000 acres in need of reforestation. The actual backlog, however, may be much greater—perhaps two or three times that amount. Furthermore, the Forest Service substantially undercharges for such consumptive uses of public lands as mining and timber harvesting. Thus, the agency spends too little on its resources and sells them too cheaply, but makes its management of resources appear sound by basing its arguments on the notion of fiscal balance.

With a balanced system, it is important to get prime timberlands into sustained production. But it is essential that in doing so, the lands be managed for both present and future timber needs—and not exploited for the short-term benefits of a few. Resolution of the issues raised by RARE II can mark the beginning of a new era in land and resource management in our country. We need managers who can enhance the remarkable conversion process of sunlight and soil being turned into forests that would, if managed properly, provide wood products forever. Sadly, attainment of such capability is hampered by the fact that neither the Forest Service nor any other federal resource-management agency has ever had adequate funds to make comprehensive inventories and assessments of the resources they must manage.

Nothing, however, can be more important than preserving the wilderness areas that are the birthright of present and future Americans. No single generation really owns these lands. □

#### Recommendations for Trinity County

	Board of Supervisors	Forest Service*
	Acres	Acres
Wilderness	179,500	16,800
Future Planning	6,200	68,000
Nonwilderness	185,300	263,700
Withdrawal from Primitive Areas	0	59,500

\*January, 1979

How to Profit from The Revenue Act of 1978

# The Ultimate Tax Shelter



by  
TED NICHOLAS

**T**ax experts are now referring to a small, privately owned corporation as "The Ultimate Tax Shelter." This is especially true with the passage of the Revenue Act of 1978. This law makes most former tax shelters either obsolete, or of little advantage. Investments affected include real estate, oil and gas drilling, cattle feeding, movies, etc. These former tax shelters have lost their attractiveness. Aside from that, these tax shelters required a large investment. Only a small segment of the population could benefit from them.

I've written a book showing how you can form your own corporation. I've taken all the mystery out of it. Thousands of people have already used the system for incorporation described in the book. I'll describe how you may obtain it without risk and with a valuable free bonus.

A corporation can be formed by anyone at surprisingly low cost. And the government encourages people to incorporate, which is a little known fact. The government has recognized the important role of small business in our country. Through favorable legislation incorporating a small business, hobby, or sideline is perfectly legal and ethical. There are numerous tax laws favorable to corporate owners. Some of them are remarkable in this age of ever-increasing taxation. Everyone of us needs all the tax shelter we can get!

Here are just a few of the advantages of having my book on incorporating. You can limit your personal liability. All that is at stake is the money you have invested. This amount can be zero to a few hundred or even a few thousand dollars. Your home, furniture, car, savings, or other possessions are not at risk. You can raise capital and still keep control of your business. You can put aside up to 25% of your income tax free. If you desire, you may wish to set up a non-profit corporation or operate a corporation anonymously. You will save from \$300 to \$1,000 simply by using the handy tear-out forms included in the book. All the things you need: certificate of incorporation, minutes, by-laws, etc., including complete instructions.

There are still other advantages. Your own corporation enables you to more easily maintain continuity and facilitate transfer of ownership. Tax free fringe benefits can be arranged. You can set up your health and life insurance and other programs for you and your family wherein they are tax deductible. Another very important option available to you through incorporation is a medical reim-

bursment plan (MRP). Under an MRP, all medical, dental, pharmaceutical expenses for you and your family can become tax deductible to the corporation. An unincorporated person must exclude the first 3% of family's medical expenses from a personal tax return. For an individual earning \$20,000 the first \$600 are not deductible.

Retirement plans, and pension and profit-sharing arrangements can be set up for you with far greater benefits than those available to self-employed individuals.

A word of caution. Incorporating may not be for you right now. However, my book will help you decide whether or not a corporation is for you now or in the future. I review all the advantages and disadvantages in depth. This choice is yours after learning all the options. If you do decide to incorporate, it can be done by mail quickly and within 48 hours. You never have to leave the privacy of your home.

I'll also reveal to you some startling facts. Why lawyers often charge substantial fees for incorporating when often they prefer not to, and why two-thirds of the New York and American Stock Exchange companies incorporate in Delaware.

You may wonder how others have successfully used the book. Not only a small unincorporated business, but enjoyable hobbies, part time businesses, and even existing jobs have been set up as full fledged corporations. You don't have to have a big business going to benefit. In fact, not many people realize some very important facts. There are 30,000 new businesses formed in the U.S. each and every month. 98% of them are small businesses; often just one individual working from home.

To gain all the advantages of incorporating, it doesn't matter where you live, your age, race, or sex. All that counts is your ideas. If you are looking for some new ideas, I believe my book will stimulate you in that area. I do know many small businessmen, housewives, hobbyists, engineers, and lawyers who have acted on the suggestions in my book. A woman who was my former secretary is incorporated. She is now grossing over \$30,000 working from her home by providing a secretarial service to me and other local businesses. She works her own hours and has all the corporate advantages.

I briefly mentioned that you can start with no capital whatsoever. I know it can be done, since I have formed 18 companies of my own, and I began each

one of them with nothing. Beginning at age 22, I incorporated my first company which was a candy manufacturing concern. Without credit or experience, I raised \$96,000. From that starting point grew a chain of 30 stores. I'm proud of the fact that at age 29 I was selected by a group of businessmen as one of the outstanding businessmen in the nation. As a result of this award, I received an invitation to personally meet with the President of the United States.

I wrote my book, *How To Form Your Own Corporation Without A Lawyer For Under \$50*, because I felt that many more people than otherwise would could become the President of their own corporations. As it has turned out, a very high proportion of all the corporations formed in America each month, at the present time are using my book to incorporate.

Just picture yourself in the position of President of your own corporation. My book gives you all the information you need to make your decision. Let me help you make your business dreams come true.

As a bonus for ordering my book now, I'll send you absolutely free a portfolio of valuable information. It's called "The Income Plan" and normally sells for \$9.95. It describes a unique plan that shows you how to convert most any job into your own corporation. You'll increase your take-home pay by up to 25% without an increase in salary or even changing jobs in many cases. If you are an employer, learn how to operate your business with independent contractors rather than employees. This means that you'll have no payroll records or withholding taxes to worry about. And you'll be complying with all I.R.S. guidelines. "The Income Plan" includes forms, examples and sample letter agreements to make it possible.

I personally guarantee your purchase in the fairest way I know. If you feel my book is not all that I've described, return it undamaged within two weeks and I'll promptly refund your money with no questions asked. If you should decide to return it, you may keep the bonus Income Portfolio for your trouble.

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# Population Policy In the United States

LESLIE CORSA

**E**VERYONE SEEMS to understand that the world's population must someday cease growing. That day is rapidly approaching—our numbers and the consumption associated with our ways of living are nearing the carrying capacity of the planet. Our death rates are steadily declining; birth rates remain high but are coming down in many countries. The greatest declines in death rates and the highest birth rates are among the two thirds of the world's people who live in the poorer, less-developed countries—people whose rising expectations for a better life are frustrated by growing disparities between rich and poor. Population is not important in itself, as a collection of numbers, birth or growth rates. It is important because of the pervasive, long-term effects of population growth and size on the quality of life, and because of the need in poorer countries for resources to feed, clothe and house more people (rather than educating and employing fewer). The importance of population in the richer countries is felt in the increasing demand for fuels and materials and the resulting pollution of air and water. Only recently have Americans had to think about the relationship between population growth and the quality of life. Our history of open land, extensive forests, plentiful water and minerals encouraged immigration and large families. Growth was good and more was better. True, we have moved steadily during the past century toward smaller families, and birth control is now a common practice. But we still encourage parenthood in many ways, and many communities still identify economic well-being with continued population increase. We still have the most liberal immigration policy of any country in the world; we take in more people legally each year than all other developed countries combined.

Today, the population policies of the government are not clearly or completely stated, so they must be inferred from the government's actions. For example, federal funding for family planning, lack of federal funding for abortion, current immigration laws and the extent to which they are enforced—all these factors constitute a population policy, albeit an inconsistent one.

The most significant step in recent formulation of population policies was the 1970-72 work of the Commission on Population Growth and the American Future, which was authorized by

Congress, appointed by President Nixon and chaired by John D. Rockefeller 3rd. This group of 24 citizens, representing a broad range of political, social, economic and ethnic interests, examined what we know and don't know about population and its relation to national goals. The group arrived at remarkable though not unanimous agreement on most issues, concluding that "no substantial benefits would result from continued growth of the nation's population" and that "stabilization of our population would contribute significantly to the nation's ability to solve its problems." This is also the position of the Sierra Club and of many other organizations. President Nixon, however, never stated his position—nor have presidents Ford or Carter. Nixon's personal objections to legal abortion led him to ignore the basic message and the sound work of the commission. Its report and six volumes of excellent research papers, nevertheless, remain important assets for future formulation of policy, even though the House recently voted not to reauthorize the Select Committee on Population.

Resolutions have been introduced in Congress since 1971 to declare population stabilization as a national goal, but they have died because many members of Congress remain ill-informed about population matters. Some believe that the population has already stopped growing; others think the older average age of the population that would result from population stabilization would be detrimental to the economy. And still others believe that undesirable forms of coercion would be required to achieve stabilization. The myth that growth is always good remains in some minds, and population stabilization remains a mystery in others.

The first step in developing a national population policy should be to identify the important values in life that would be affected by population and by actions intended to influence population. For example, a decision to accommodate much more population growth in this country, while simultaneously protecting agricultural lands and urban open space, would necessitate higher housing densities and cluster development. The more explicitly, rationally and completely a government states its goals, directions and means on any public issue, the

*Americans live, on the average, more than seventy years, and we are reasonably certain that life expectancy will continue to increase slowly.*

more easily it can design programs to meet those goals. This observation may seem painfully obvious, but it is frequently and inexplicably ignored by government.

A rational approach to population policy requires sound understanding of what determines population growth and how growth, in turn, affects our way of life.

Demography, a young, highly specialized science, has uncovered mathematical relationships among the birth, death and migration rates of a population and its size and age-sex composition. Knowing these rates enables us to predict how many young and old women and men will reside in a given area at a future date. Americans live, on the average, more than 70 years, and we are reasonably certain that life expectancy will continue to increase slowly as the age-specific death rates slowly decrease. We cannot be so sure of future birth rates. There are many variables involved—including changes in marital status and the use of birth-planning methods, as well as such general determinants as education, work, income, security and equality. We are seeing trends towards later and fewer marriages, greater use of contraception, and fewer children wanted, even though experts don't all agree on how these factors will change or on how to translate them into projections of future births. And, although most legal immigration is known and controlled, illegal immigration is neither accurately known nor regulated.

The demographic consequences of population stabilization are clear. There will be relatively fewer children and proportionately more older persons. The age structure will resemble a modern rectangular skyscraper, not the pyramid that symbolizes the current population structures of most countries.

The median age will be 37, compared to 28 for the U.S. in 1970. There will be a slight decrease in the dependent proportion of the population (children and the aged) and a marked *increase* in the crude death rate. A stable population with life expectancies at birth of 75 years would have, for each 1000 persons, 13.3 births and deaths a year. The increased crude death rate, of course, merely reflects the changed age structure. True mortality, as expressed in age-specific death rates and life expectancies, is expected to decrease.

There will be little change in ethnic composition. Minority groups usually have higher birth rates than the rest of the population, so their numbers are proportionately increasing. But a more important factor in determining ethnic composition is immigration, since most immigrants now come from Latin America or Asia.

The social and economic consequences of population stabilization are less clear. Many possibilities have been examined by a number of commissions and scientists; all agree that an older, stable population will result in more benefits than

problems. These conclusions are supported by the experience of nations such as Sweden, Britain and Germany, whose low population growth rates have continued long enough that their age-sex structure now approximates that of a stabilized population. But the U.S. will not reap the benefits of a stable population—less pressure to develop wilderness, use up finite resources, pollute clean air and so forth—until steps are taken to move from our present growth rate of two million persons a year to zero or less.

If the consequences appear desirable, what about the means to reach a stabilized population? A few highly industrialized

### **What is Zero Population Growth?**

Zero population growth (zpg) means: the sum of births minus deaths plus net immigration equals zero, on the average, over a period of time. An area with zero population growth will, of course, experience minor fluctuations in all three factors, but over any significant period there will be no net increase. Population stabilization means zero population growth maintained indefinitely. When death rates are low, immigration must be offset by even lower birth rates to achieve stabilization. If birth rates drop below death rates, population growth can be maintained, if desired, by increased immigration.

Zero population growth is sometimes confused with "replacement reproduction," which occurs when each generation replaces itself with exactly the same number of persons in the next generation. It means that each woman will replace herself, on the average, with one girl who survives through her reproductive period. With current sex ratios at birth (1.05 boys per girl) and present mortality rates, replacement reproduction requires an average of 2.11 live births per woman for the U.S.

If a society experiences no immigration and if it maintains replacement reproductive rates, eventually its population stops growing. But "eventually" could take a long time if the population has an unusual age structure. Our population, for example, has a high number of women of reproductive age because of the post-World War II baby boom. It might take as long as 70 years for births and deaths to even out and the population to stop growing. With replacement reproduction and no immigration, the U.S. population would stop growing in the year 2030 at 270 million people. In comparison, with replacement reproduction plus legal immigration (estimated at 400,000 per year) the population in 2030 would be 304 million—and still increasing.

*Public funding for schools helps families  
raise children. On the other hand,  
the lack of publicly funded day-care centers places  
a financial burden on parents.*

European nations have already reached zero population growth without any intentional governmental action. But most countries will need governmental leadership, support, monitoring, analysis and periodic policy modifications to maintain whatever population is considered desirable. Nations such as the U.S., where immigration is a substantial component of population growth, will need to revise immigration policies periodically for many reasons, not all related to population change. Less developed countries cannot be expected to achieve stabilization quickly or easily, but some basic actions should be taken by all nations.

### The U.S. Population

The United States is continuing to grow steadily by about two million people a year. At mid-1979, the population will be about 220 million, projected from our last census in 1970 (soon we will have total counts every five years instead of every ten, and intercensal estimates will be more accurate). During 1978, about 3.32 million live births were registered (a birth rate of 15.3 per 1000 population per year); and about 1.93 million deaths were registered (a death rate of 8.8 per 1000). The U.S. admitted about 400,000 legal immigrants (about 1.8 per 1000) for a known minimum population growth of about 1.83 million (8.3 per 1000). This rate has been roughly constant for the last five years (Table 1) and is likely to continue for the next five years if our increasing numbers of women of reproductive age (from the post-WWII baby boom) continue to have decreasing numbers of children per family. Our actual population growth is greater because an unknown number of illegal immigrants enter and remain in the U.S. each year, almost certainly raising our real growth rate to at least 1% per year.

**Table 1. Population Change Rates, United States, 1970-77**

	Rate per 1000 population								
	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Birth</b>	18.4	17.2	15.6	14.9	14.9	14.8	14.8	15.4	15.3
<b>Death</b>	9.5	9.3	9.4	9.4	9.2	8.9	8.9	p8.8	p8.8
<b>Natural increase</b>	8.9	7.9	6.2	5.5	5.7	5.9	5.9	p6.6	p6.5
<b>Immigration (net legal)</b>	2.5	1.9	2.2	1.6	1.6	1.9	1.8	e1.9	e1.8
<b>Known pop. growth</b>	11.4	9.8	8.4	7.1	7.3	7.8	7.7	8.5	e8.3

Sources: National Center for Health Statistics, Monthly Vital Statistics Reports  
Bureau of the Census, Current Population Report Series P-25, No. 706.  
p=provisional e=estimated

- Governments should deal openly and explicitly with the effects of population growth on general welfare and consider population causes and consequences when formulating and implementing national goals. For example, how should the U.S. balance its concern for refugees against the desire for population stabilization? Should public schools attempt to teach birth control and the values of family size, to the consternation of parents who believe such things are too important to be entrusted to the schools? Should children be given discounts on airlines, movies and buses? On one hand, such discounts encourage population growth by reducing financial burdens on parents. But on the other hand, the welfare and education of children is essential to the nation's future.

- Governments should provide easily available, safe, effective birth control methods.

- Governments should provide people full opportunity to learn about the causes, consequences and means of changing population growth, size and distribution. Formal population education in schools and general public education programs should be strongly supported.

- Governments should explicitly recognize that their actions already affect the benefits and costs of family size. For example, public funding for schools helps families raise children. On the other hand, the lack of publicly funded day-care centers places a financial burden on parents. Governments should modify economic and social benefits and incentives in order to help individuals and communities understand and secure the advantages of smaller families.

- Governments should take into account the effects of international migration on their population changes.

- Governments should develop the internal capability to obtain, analyze and utilize relevant information for population planning. This involves collecting of data by census and surveys, and interpreting the information. For example, the effect of population trends on planning for health care must be explicitly considered.

- Governments should help to develop and disseminate new information needed to improve population planning. For example, more research is needed on the determinants of population change in order to help formulate better population policies.

- Governments should equalize the status and opportunities of women with those of men.

- Government should respond to promising initiatives by private individuals and organizations. The family planning movement in the U.S. was funded entirely by private contributions until 1970. Virtually all consideration of population policy is by academics and by such private organizations as

*Continued on page 62*

# The Fish and the Dam

OLIVER A. HOUCK



**W**hen the Endangered Species Act was renewed at the end of the 95th Congress for eighteen months, new provisions were added to it. A review board and an Endangered Species Committee were established to consider projects where irresolvable conflicts have arisen between development and the protection of threatened or endangered species. The committee, after careful review, can exempt projects from the Endangered Species Act, thus, theoretically, condemning endangered species to extinction where they interfere with overriding economic concerns. Congress designated the first two projects the committee was to consider: the Grayrocks Power Project (see page 56) and the Tellico Dam.

This is the story about the fish and the dam  
and the war they started down in Tennessee.  
Such an unlikely pair.

On this side a fish so useless its defenders couldn't find  
one good reason to keep it around,  
and on the other a dam so doubtful its boosters  
never did talk about it.

Well, when mad John Brown marched on Harpers Ferry  
we all ended up at Gettysburg.  
There are larger rhythms.  
This one was coming, I think.

The fish has been with us since the Pleistocene,  
since long before we were with us,  
running its little shuttle in the Tennessee River.  
It spawns in the shoals,  
the eggs float a few miles downstream,  
the small fry wriggle back up to spawn again and die.  
They are a tiny secret;  
like microbes, nobody knows they are there.  
Twenty-five times we have dammed the River,  
we have broken up all of their shuttles but one,  
we are coming now with number twenty-six  
when . . .  
what's this in the water?  
A three-inch fish that eats black snails?  
A Snail Darter.

Tellico Dam squats undone across the Little Tennessee,  
a jewel of running water in sweet farm country with  
topsoils five feet black and deep.

The Tennessee Valley Authority is going to dam the River  
and flood the farms for another jolt of electric power  
in a region already crackling with electric power.

This is what TVA knows how to do.  
So when TVA learns about the Snail Darter,  
it does what it knows:  
it speeds up construction of Tellico Dam.

The Environmental Biggies are in agony.  
For the first time in the history of the country,  
in the history of the world,  
they have a law that protects endangered species.  
The law is untested, here comes Tellico, and the terrain  
could not be worse.  
No national Eagle, no heartbreaking Swan.  
A three-inch fish,  
an ugly fish with a Plain Jane name  
(why couldn't they have called it the "Roosevelt Darter"?)  
a fish nobody ever heard about and a dam forty,  
no, fifty percent complete and building fast.  
It is such an easy test to lose, and a loss will sink them all:  
the Whooper, the Grizzly and the great Gray Whale.  
And if the case should win—  
just if—  
there is always that lean and hungry Congress  
so ready to undo any law  
that stands in the way of funneling public money back home.  
Wildlife, Sierra, Audubon are wringing their hands.  
Whatever happens, keep it in Tennessee.

The Cherokee Indian  
rose to power on the River in a town called Tonasse.  
Proud people, our  
comrades in arms in 1776,  
we took their name and made it Tennessee  
and sent them packing on the Trail of Tears  
to a land like the moon, Oklahoma.  
The townsite remained, like a poster from  
last year's circus.  
But no law protects Indian lands  
from the waters behind the dams;  
few laws have teeth like the Endangered Species Act.  
Tellico will flood the Cherokee birthplace.  
Bury my heart at Tonasse.

Zygmunt B. Plater should have been a preacher,  
like John Brown.  
Instead he is teaching law in Tennessee  
when the Snail Darter is discovered.  
The Darter is endangered.  
The law is strict and fundamental:  
Thou shalt not kill an endangered species.  
That is all there is to it, and while the mighty armies  
of the environment stall and debate in camp,  
Zygmunt Plater marches to Knoxville courthouse  
and starts the endangered species war.

The President of the United States favors the Darter  
He has floated down rivers like the Little Tennessee,  
dipped his face in the water to cool;  
he has fished in them, farmed alongside them and fought dams  
all over Georgia.  
Like Zygmunt Plater, he could be a preacher.  
There is right and there is wrong.  
The Darter is right.  
His environmental advisors agree: Drop the Dam, they tell him.  
But the President is not the only man from Georgia in the web.  
His Budget Maestro, Mr. Lance, has just left under a cloud  
and his Attorney General, Mr. Bell, is skirting smaller ones  
not of his own making.  
Integrity is at stake, Mr. Bell tells the President.  
We must defend the case as lawyers.  
Let the Court decide.  
No political influences, no more Watergates.  
He is sincere and he prevails.

The Attorney General of the United States will take  
personal command of the case.  
His presence elevates the contest, but he carries a handicap.  
He will present a split brief to the Supreme Court.  
It will contain both the argument in favor of the Dam  
and the argument for the Darter, written by the President's  
Environmental Men, attached as an appendix but  
as visible as a second head.  
It is an unusual brief, and it will confuse the Court.

Meanwhile, Senator Howard Baker is on the hot seat.  
Why do these things always seem to happen in Tennessee?  
Only last January it was Overton Park in Memphis.  
His highway people wanted so much to pave Overton Park;  
wouldn't Senator Baker change the law for them?  
Three months later, Tellico Dam.  
Now Senator Baker cares about the environment.  
He sponsored the Clean Water Act and delivered it sound.  
But TVA is big business back home  
and Senator Baker's party cares about big business.  
Yet People care about endangered species too.  
You simply don't charge out and kill them,  
not if you're running for President.  
Senator Baker quietly draws up a bill and prays  
the Supreme Court will make this one go away.

Early on the morning of the argument the  
Attorney General leaves his office,  
leaves the room with the nine-foot standard holding  
the American flag,  
a polished hardwood standard topped by  
the American Bald Eagle, poised in shining brass,  
wings spread to attack, beak in full scream,

The Attorney General rises to make his point.  
This is the moment.  
He holds up a bottle containing a yellowish liquid and  
a small fish, a dead Snail Darter.  
This is what this case is all about, he says.  
This little thing in the bottle.  
The rest of his argument is not remembered.

Zygmunt B. Plater is a lean man with dark eyes.  
He delivers his argument in a passionate whisper.  
He will speak the same way in a taxi or on the telephone,  
but the Court does not know this.  
Mr. Justice Powell can take it no longer.  
He is a southerner too, an outdoorsman and a practical man—  
within a month he will write a stirring defense for  
the fish, beasts and fowl of the forests—  
but he has seen the fish in the bottle.  
He leans down from the bench to question.  
What earthly good is the Snail Darter?  
Can you use it for bait? Can you eat it for supper?

The Chief Justice of the United States  
carries his responsibilities heavily.  
He must uphold the law, but he'd like to also uphold those  
conservative principles for which he was appointed.  
His dilemma, too, is painful.  
The Snail Darter is clearly *de minimis*, and a symbol  
of the very misty-eyed liberalism he has spent  
a distinguished career opposing.  
It is just as clearly protected by law.  
The Chief Justice will uphold the law,  
but his opinion will convey both messages.  
The law wins, but it is surely an ass.  
Your baby, Congress. Change it.





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**Sierra Club**

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DEPARTMENT D-59  
P.O. BOX 7959 RINCON ANNEX  
SAN FRANCISCO, CA 94120

## MEMBERSHIP FORM

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Contributing .....	<input type="checkbox"/> 100.00	<input type="checkbox"/> 104.00	<b>LIFE MEMBERSHIP</b>		
Spouse of Life Member	<input type="checkbox"/> 12.00	—	Per person .....	<input type="checkbox"/> 750.00	
Student .....	<input type="checkbox"/> 12.00	<input type="checkbox"/> 16.00			

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*Mail to:*

## Sierra Club

DEPARTMENT D-59  
P.O. BOX 7959 RINCON ANNEX  
SAN FRANCISCO, CA 94120

It is the turn of the Senate to panic.  
They have created a monster—a very popular law  
that could get in the way of all those highway projects  
and dams and canals and military bases  
that are the very gears and grease of  
getting reelected in America.  
A Congressman from Tennessee proposes amendments to  
strike endangered species from the protected list,  
all eighty or so, one by one.  
A Senator from Idaho proposes to legislate between species,  
those that are important and those that are not.  
Senator Baker is the voice of reason.  
Here is the way out—if someone has to decide these things,  
let it not be someone who will then have to stand for election:  
We'll set up a committee of bureaucrats.  
A statesmanlike compromise, says the *Washington Post*.  
An Extermination Committee, say others.  
The Senate approves, 94-3.

The Administration makes a late gambit.  
S. David Freeman is the new Chairman of TVA,  
an articulate scientist,  
an independent thinker,  
President Carter's man.  
He comes to testify on Capitol Hill.  
Tellico Dam need not wipe out the Darter, he says.  
Or that prime farmland.  
I will find a better alternative to Tellico, he says.  
This is unwelcome news, indeed.  
Congress doesn't care about Tellico, or its alternatives;  
Congress is thinking about all the other dams and highways . . .  
Mr. Freeman falls on deaf ears.  
For now the battle has passed him by.

The scene shifts to the House of Representatives,  
the big jungle,  
where small squads and solo aces, snipers and kamikazes  
skirmish and no one knows who is winning.  
Proposals to amend the Act rise like rockets  
to explode and disappear,  
exemptions for Tellico, exemptions for fish.  
There *is* no House proposal and time is running out.  
House members are running out, running for reelection,  
running for the telephone, running on pills,  
voting at midnight, voting on taxes, parks, bombers and housing,  
voting on instincts, swaps and nods from aides in the aisles,  
from lobbyists in the wings, leaders on the floor . . .  
What bill is this?  
What day is this?  
In the midst of it all the Endangered Species Act  
quietly expires.  
Its authorization has simply run out.  
There is no endangered species law.  
My God, let's pass something!

The madcap session is over.  
The 95th Congress has adjourned and left behind  
its cut-'n-paste legacy for endangered species:  
Everybody's Idea for Taming the Wild Act:  
hearings, hurdles and a Committee of Seven,  
with the life-or-death call on  
darters, wolves and other obstacles.  
And at the bottom of the package, neatly wrapped,  
a special deal for Tellico too:  
Unless the Committee rules for the Darter in sixty days  
the big gates close, Darter be damned.

And so the buck passes for the last time  
to the Magnificent Seven, men of stone and dollars . . .  
the Secretary of the Army, the President's Economic Advisor . . .  
men not known to bleed easily over small creatures hanging  
on the fringe of life.  
They sit for their decision on a high public stage,  
three large flags behind them,  
looking at the balance sheet.  
Now for the first time ever Tellico Dam stands stripped  
of its promotional hoo-haw, its costs exposed  
like old lovers and bad checks,  
damning,  
cumulative,  
unmistakable.  
Who will speak for this (turkey), asks  
the Army Secretary, hopefully (his agency builds dams too).  
But no one does.  
It is the Economic Advisor who delivers the coup:  
I move no exemption for Tellico, he says,  
it's a lousy investment.  
The vote is quick. The room is large,  
but from the back you can catch  
a glint from the top of the flagpoles,  
the three eagles in lacquered brass.  
Over the rush of the crowd, if you close your eyes,  
you can hear them faintly screaming.

Stories like this should have an end,  
but that same evening  
Senator Baker of Tennessee loses his head.  
He reacts by condemning the Committee of Seven  
(has he forgotten whose idea it was?)  
and announcing a new bill to exempt the Tellico Dam. . . .  
Stories like this should have an end,  
but they rarely do.

---

*Oliver A. Houck is general counsel for the National Wildlife Federation  
in Washington, D.C.*



# On Their Own in Yosemite

**O**ne day early this year, David Nelson, a Club member from Kensington, California, showed us a remarkable document: a hand-written diary of a 1914 adventure in Yosemite. Written by his aunt, Eva Foye, it tells the story of a trip that was unusual for its time—four young women alone in the Sierra Nevada, enjoying themselves tremendously.

We found it a fascinating journal—full of local and sometimes surprising detail and suffused with a profound affection for the mountains. While we were preparing her diary for publication, Ms. Foye passed away at the age of 93.

EVA N. FOYE

*Saturday, July 4th* We started about 6 o'clock, in Mr. Mahoney's Buick with Louise. The trip was perfect, the machine ran well and the road, the new state highway, was the finest ever, as smooth as Broadway, the "dream way" we called it. It was a perfect ribbon of a road—a concrete roadbed splendid and firm, no dust and no jars.

We saw something I have never seen before—mirages. Sometimes, ahead of us, there seemed to be water in the road with trees reflected in it; though the trees were real, the water was not. As we came closer, it disappeared. We all saw

the visions at the same time, too.

We passed through fine country, green alfalfa fields with the purple haze of the blossoms over them, peach orchards and sweet-potato fields. In one bare field we saw five or six ground owls, looking very wise.

We reached Merced at about 3:20 and had only to wait until 4:40 to meet our train, which arrived on time. Dr. Florence Sylvester and Lillian were watching for us aboard the train, anxious that something might have delayed us. We changed cars at Berenda and reached Raymond at about 7:20. We had eaten on the train so we were ready to start out on our hike, figuring on walking about three miles before we camped for the night. People were much interested in us and watched us load our packs and start off. The hotel man was very kind and gave us all the water we could drink and filled our canteen for us.

We found a sheltered spot by the side of the road and made camp. It was warm, and I was able to strip and take a dry rub with my rough towel without any discomfort.

It was beautiful to slip into our sleeping bags and drift to sleep under the stars. Our Dr. Florence read the 91st Psalm by the light of our candle.

*Monday noon* Four feminine tramps in various stages of undress. We have just had the most delicious (that's

really a good adjective) bath, right in one of nature's pools with tiger lilies and honeysuckle growing around. This is the first *real* bath I have ever had. I have read of bathing in creeks, *a la* "September morn," but had no idea it felt so good. The shock of the cold water was the loveliest sensation ever. Then we had our lunch and are now resting and "inviting our souls."

Yesterday, after a lengthy roadside wait, the stage came by, an elegant white auto driven by a most obliging young man who kindly loaded all our packs, mostly up in front where the sun and engine heat played havoc with our cheese and chocolate (this we found out later, of course). But we were thankful



Illustration by Colleen Quinn

to be rid of our packs and for the relief of having our shoulders free. The rest of the day was uneventful, through dry country, rolling hills covered with scrub oak and digger pine, very hot, so we rested often and didn't make very good time. We reached Grub Gulch that evening about 6:15 and found our packs waiting for us on the store porch. A very pleasant man, the hotel keeper, showed us a fine camping place near his farm yard.

This morning we were up bright and early, about 3:45, and after a good breakfast we started, leaving our packs to be picked up by the stage again and dropped at Miami Lodge. The people we have met have been so kind and ob-

liging, so willing to give advice about roads, shortcuts, etc. They think our trip is fine and that we are very brave to start out without any men in the party. We have had the greatest luck with shortcuts and have learned to read signs and how much to believe people when they tell us mileage—we always multiply by two, and then we aren't more than a few miles off.

*Tuesday noon* Breakfast over, we left our packs to be driven on to "Four Mile" lodge and started out to see a local lumber mill. On the road we talked to a man in a rig, who said as he drove away, "Dear souls, how I pity you your walk," and you cannot imagine the pitying look in his eyes. The mill is a very busy place, and it was interesting to watch the logs floating around in the pond, then brought into the mill, sawed up into planks, chained together and sent shooting down the flume. I'd like to have ridden one down the chute. About noontime a logging train started for Fish Camp, and we got on. It was a hot ride, and we were nearly cooked by the time we reached Fish Camp. It looks like a mining camp: There is but one street, with a row of buildings (shacks, almost) on each side; a store, a hotel, a butcher shop and also a dance hall. The rest are private houses, I guess. Louise and Lillian wanted a hot dinner so they stopped at the hotel, but the doctor and I

bought some milk and a homemade pie and went down to a cool place by the creek to rest and eat. We were pretty warm, and the water looked so inviting (we were in a nice sheltered place) that we went in bathing. It was simply fine, better than yesterday; the creek was wide and had a sandy bottom and in some places was above our heads. We even tried to swim, but I couldn't. We washed all the clothes we could spare and splashed around in the water for a long time.

*Later in the evening* "Mr. Four Mile" and his wife are very nice, and we sat and chatted a while. This is the tollgate to the Big Tree Grove, but we went in free because we had no animals of any sort. We made a campfire—a fine one if I do say so myself—and fried bacon and eggs and made beef tea and had a fine dinner. At last we are in the Big Trees. It gives one the feeling of being in a cathedral, and one instinctively hushes one's voice in speaking.

We have walked over the prone, helpless "Fallen Monarch." It seemed almost wicked to do it. We are sitting at the base of "Grizzly Giant," the oldest and largest tree in the world. Its age is estimated at about 8000 years. What must the world have been when this tree was in its prime! There is only one thing to mar the perfection of this place, and

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that is mosquitos. I never have seen such a lot of them or such hungry ones. They nearly drove me frantic, and if I hadn't had my mosquito netting with me I think I would have done something desperate. The keeper said they would disappear at sundown. Let us hope so.

*Wednesday* From the Big Trees we started down the Lightning Trail for Wawona. It was a long, steep trail but a beautiful one and was supposed to be four miles long, but as usual it was about twice that. We discovered that the clearing we had noticed from Point Wawona was cultivated land, with our destination, Hotel Wawona, invisible from above, at one end. We hunted up our packs and found a fine camping spot on the banks of the South Fork of the Merced River and made our fire. I tell you supper tasted good! We had Knorr's Pea Soup with tomatoes, hardtack, canned peaches and milk. We had an ideal camp spot, and the roar of the river lulled us to sleep as we watched the stars through the trees.

*Thursday* This morning we started bright—no, not exactly bright, for we were ahead of the sun—and early on 26-mile Alden Camp Trail for Glacier Point. This is the last day of our journey in, and I am rather sorry to see the end of it, though I am longing to reach the Valley. This has been so pleasant—our early rising, peaceful noon rests, the excitement of camping each night in a different spot. Each ravine and height on today's trail had new beauties for us. At one time we passed through a mass of lupines on the hillside, with long purple plumes, then down into a canyon where a little stream foamed over the rocks making miniature cascades and waterfalls, then through groves of tall trees—"Forest aisles would I be treading"—where saucy chipmunks waved their tails at us and dared us to follow.

*Later* Yosemite at last! It seems like a dream. I will never forget our first sight of the Valley. It was just at sunset, and the clouds above the snow-clad peaks were all pink. Half Dome loomed grandly on the left side and Nevada and Vernal falls plunged down over the cliffs opposite. And the vastness, the wonder of it cannot be put into words. You just want to stand and look and look. The roar of the falls must be tremendous at close range. We can hear them so plainly at this distance. To go

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back to more material things . . . Our trail finally reached the road, and although the map said it crossed it, we could see no sign of a trail on the other side so we decided to continue along the road. We were about six miles from our destination when a stage with two empty seats came along and picked us up. There we saw our beloved packs so we felt quite at home. It felt pretty good to be riding; our trail had been long and strenuous.

After we had arrived and gotten over the wonder of the scene, we found a camping place for the night and had a good night's sleep.

*Friday* This morning we were up for the sunrise, and it was as spectacular as the sunset view. We saw it reflected in Mirror Lake far below. We walked out to Glacier Point and stood on the overhanging rock; at least, I sat on it. It was a little too hard on the nerves to stand so close to the edge of things. From there we saw the upper and the lower Yosemite Falls, beautiful beyond words. And far, far below, the Merced River flowed calmly through the trees, winding past little white tents. Camp Curry looked like a cluster of toy houses.

There was no way of getting our packs down except by carrying them, but they are pretty light by now, so we don't mind them. We are on our way down to the floor of the Valley along a fine steep trail. We have passed Illilouette Falls and are camping near Nevada Falls. Oh! the wonder of that roaring, rushing stream tumbling madly over the edge of the cliff, tossing its arms with the wild joy of being free from the snows above. It is the wildest of all the falls. Its power and strength come to you as you stand close by and feel the wild force that carries it along.

*Evening* We are at our camping place at last, on the banks of the Merced River, almost at the foot of North Dome and Washington Column and just below Glacier Point. Our trail from Nevada Falls continually revealed new glimpses of the falls and the river, then soon Vernal Falls, with its different appeal—calmer, not so wild and demonstrative in its joy. Past that we took what is called "Mist Trail"; it leads along the very edge of the fall into the mist arising from the pool below. Down, down we went following the fall with its roar in our ears and its spray in our faces, perfect rainbows everywhere, close to nature indeed and to elemental forces.

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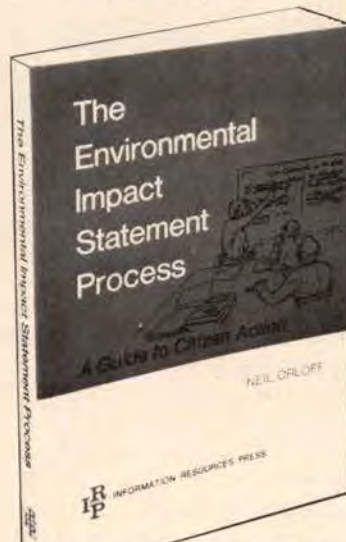
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Neil Orloff was Assistant Director of the Environmental Protection Agency's Office of Federal Activities in charge of the review of environmental impact statements. Subsequently, as legal counsel to the President's Council on Environmental Quality, he helped develop the governmental guidelines for the operation of the environmental impact statement process. He currently teaches environmental law at Cornell University.

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Finally we reached Camp Curry, where we left the doctor and our packs while we went on to Yosemite to have our campsite assigned and to buy supper and breakfast; our food supply is pretty low.

We found a pretty good camping place (though not as good as we have had) and a kind neighbor who loaned us a handy wire grating for cooking and enough wood for supper. He probably pitied our manless state!

We have been real curiosities along the way. People don't seem to understand how we can find the joy we do in our tramping. And they almost always ask us if we aren't afraid. That is such a queer thing! What have we to fear? Surely our friendly woods and streams have no other feeling but kindness towards their little human sisters who love them so. And all the humans we have met have been so kind to us and have done so much to help us on our way.

We had a real supper: steak, bread—real, fresh bread—and canned apricots. It tasted so much better than a dinner at Camp Curry would have.

*Saturday* This looks more like Monday morning than Saturday; it has been general washday, and all sorts of articles of wearing apparel are spread over the bushes.

I slept better than usual last night though I seemed to feel my pack all night. Whenever I awoke I could see the moon smiling down on us. We are having a nice, lazy day, resting up after our hike. We have covered about 108 miles since our start from Raymond, and I feel good for twice as many more. We had planned, if we could get a burro at a reasonable price to carry our packs, to go on to Tuolumne Meadows, where the Sierra Club is camping, and stay there for a couple of days. We consulted with the superintendent of the Army Camp, and he informed us that he could supply the burro all right for \$10, but—the burros had not been packed since last summer, and their tempers were rather uncertain. He said there was quite a trick in packing and in keeping the animal moving. Four girls, a balky burro and four large packs suggest many comic situations with an element of tragedy in them. Fancy us sitting on a hot, dusty trail waiting for his burroship to amble on. The pictures the superintendent's words and our own fancy could conjure up were too much for our courage. So we decided that our two energetic girls, Peter Pan (Louise) and Billie Bee (Lil-

lian Brickhart), could go if they wanted to and carry their own packs while we two remained in camp and became acquainted with the Valley.

We spent part of this afternoon at the foot of Yosemite Falls. Some day I shall climb to the top and see how it glides over the edge, but for the present I am satisfied to be awed by the soft, misty sheen of the fall as it drifts down. The Lower Fall seems to rush down in such a torrent while the Upper Fall is more slow and graceful. We walked to the very foot of the Lower Fall so the mist and spray enveloped us in a moist cloak. I love the feel of the mist from the falls. It makes you feel so near nature. Also, less poetical, it feels so cool when you are hot and dusty.

*Sunday* This has been a real Sunday, calm and peaceful, spent in God's own temple. We thought first of going to church at Yosemite Village, then we decided it would be more pleasant to read from the doctor's little volume of Psalms and St. John out in some spot near the Yosemite Falls. So we have spent most of our day within sight and sound of the falls. We also have a book on flowers and trees and are trying to study.

The girls left for their long hike early this morning and won't be back until Friday, probably. I am so glad we are here and not with them.

*Monday morning* This is a regular fairy dell. A little sand space, rock-enclosed, close to the creek and shaded by a maple and surrounded by alders and willows. I wish I were a dryad and never had to leave but could slip into a tree trunk when night comes.

We have seen Bridal Veil, a fluttering, lacy bit of glorified moisture. It is close to Cathedral Rocks and spires, a most appropriate place for a Bridal Veil.

I walked up to Artist's and to Inspiration points and from there the Valley was spread before me in a dream picture, all in a bluish haze with dainty Bridal Veil on the right and grand old El Capitan guarding it on the left.

On the way down, a graceful deer bounded across the road about 20 feet ahead of me. How I wished I had my Kodak in position! It was gone in an instant. Doctor Florence is an ideal companion. She has taught me how to see and appreciate my surroundings, and I am selfish enough to be happy that the girls went on to the meadows so that I could have her all to myself.



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*Wednesday* Early this morning we packed our sleeping bags, enough food for four meals, and again took the trail for Cloud's Rest.

Up in these wilds we found a strange, grey-haired woman. She was dressed in tramping costume, except she wore gym shoes. She seemed to be gathering bits of obsidian, the stone the Indians used to make arrowheads, and was very reticent about telling us where she was camping: "Up the head of the Valley a mile or two." She was carrying a heavy pack and had been down to the head of Nevada Falls to meet the pack mules and to send down mail. Who was she? Why did she live in the wilds by herself, if she was alone? Our curiosity was aroused, but there seems to be no way of satisfying it.

*Later* Just finished supper—soup (one of Doctor Florence's own inventions—she is a wizard at soup), canned salmon, hardtack and dried figs. How will I ever be able to live under a roof again! This has spoiled me.

While I sat here writing I happened to look up, and there in the underbrush not more than 100 feet away were two deer! They stayed quite a while, feeding, then must suddenly have discovered that we weren't part of the scenery for they bounded away.


*Next morning* Cloud's Rest! The tip-top of the world. The wonder of the panorama spread about us. All about us are peaks of snow-clad mountains with forest-covered sides. Merced Lake with its river rushing from it, eager to form Nevada and Vernal Falls, later to hurry past Happy Isles; precipices of bare, solid granite; Tenaya Canyon with its lake. And over it all, the bluest of blue sky with billowing white clouds drifting by. Cloud's Rest, surely, for they seem to be coming almost close enough to touch us. The survey plate says 9924 feet elevation.

It was a long, hot climb up here. At the very end was a sort of half-natural, half-manmade stairway of about 125 steps, but below that we discovered a small patch of snow, which I suppose is almost perpetual. It was only about six feet square, but enough to excite me. It was more like ice than snow and was very hard. There was a tiny spring nearby of the iciest water.


We started early and expected to reach the top by sunrise, but it was slightly farther than we thought, so it was noon when we reached the top.

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*Later* On the way down Doctor Florence suggested staying in Little Yosemite another night, but urged me to go on to camp if I wanted. Of course I was only too happy to stay over, so we went back to our Little Deer Creek. We have only our lunch to last us for lunch, supper and breakfast, but we will start early tomorrow morning and have breakfast in camp. Our deer haven't appeared this evening. I guess they realize that there are humans around here.

*Friday noon* After a beautiful trip down, it is hot, sizzling hot, down here in camp. And presently we are going to do our washing and then go over to the Village for more provisions. Talk about hungry! I wonder if anything ever tasted as good as those eggs, hardtack and milk, after an early breakfast of six peanuts!

The girls will be here this evening from their long trip. And we must go to bed early to be up for an early start for our trip home. We will walk to El Portal and take the train from there unless Billie Bee is too tired from her strenuous trip and wants to take the stage out to El Portal. I am satisfied either way. It is only a sixteen-mile hike and downgrade most all the way, so it will be easy.

Our packs can be sent home by parcel post. Blessed parcel post! It has been a great help. That and the stages, which carried our packs from place to place.

*Later* As if in answer to my wish that we might have a thunderstorm near us, but not near enough for the shower to soak us, there has been a big, black cloud hovering over the mountains above Nevada Falls, rumbling and rolling among the rocks and only sending down a drop or two of rain.

Our washing is finished, and spread over every tree and bush around camp. It will soon be dry in this hot sun, then we will have a bath in our green-covered bathroom, but we will feel so good. I wish we could go right into the river, but we can't because all the camps use this water for drinking, so we will have to be satisfied with all the washbasins in camp for each bath.

And no one can imagine what a job it is doing a washing in two little two-by-four washbasins. We surely deserve to have our washing smell sweet and fresh from the sun and wind when we finish!

And this adds so much to the fun of camp life. It wouldn't be camping if we had too many conveniences.

To go back to last night. The girls got into camp at about 7:30, all excited over

the trip and looking all in. Again we were so glad we stayed in camp and had our peaceful days together. They had a great trip, of course, and told us all about the snowfields and the Sierra Club and the beautiful lakes and meadows and—mosquitoes! Again I was glad I hadn't gone. I probably would never have lived to tell the tale after the mosquitoes got after me!

When we finally calmed down enough to sleep it was pretty late, so we didn't get up so very early this morning. Peter Pan cooked our breakfast while we made up our packs and about 6 o'clock saw us on our way.

We have made the most wonderful progress, for at 10 o'clock we were within four miles of our journey's end. So here we stayed and will stay until almost time to start into El Portal. Our train does not leave until 8 o'clock this evening, we have plenty of time to rest until then. We will get into Oakland at 7:15 tomorrow morning. I did not fancy traveling by night; I like to watch the scenery, but it was the best time for us to start.

The walk has been fine so far, and we were so surprised when we discovered how far we had gone. It was cool and downhill all the way, so we swung along at a good pace.

About four and a half miles out of Yosemite there was a surveying party's tent, and it was just breakfast time so we were invited to have a cup of coffee and biscuits. Of course, we accepted, and we enjoyed them very much though we weren't at all hungry. Everybody is so kind to us.

*Later-El Portal* About 5 o'clock the auto stages began to pass us as we sat waiting for evening, and when one of the freight trucks came by with a big, comfortable seat in front and the driver invited us to ride with him, we thought we might as well finish with an auto ride.

I am glad we didn't get into El Portal any earlier, for there is nothing much to see, and it was pretty warm. It is cool now, and we are sitting on the sand among the rocks by the river. Have just finished supper. At about 8 o'clock the train will be along, and tomorrow morning we will be in Oakland—back to earth again and the workaday world.

I am full to overflowing with sunshine, fresh air and impressive scenes, and I know the memory of them all will help me in my coming work year. I certainly should never murmur over anything the year might bring. □

*Davis, California Amended Its Building Code  
and Decreased Its Use of Energy*

# A City Changes Its Energy Future

KATHERINE ALVORD and MICHAEL R. EATON

**P**OWER PLANTS are a hot political issue in California, second only to taxes. But while debate about coal and nuclear energy boils in the political cauldrons, a medium-size Northern California city has begun a program that, if copied widely, could spare us the hazards of either energy source. And while the Pacific Gas and Electric Company, Northern California's giant utility, mounts an expensive ad campaign to convince consumers that solar energy is not practical, that same city boasts a fully "solarized" PG&E office. The city is Davis, where energy use has actually dropped off in recent years—the average customer today uses 15% less electricity and gas than three years ago. Even more encouraging, these savings have been accomplished with remarkably little dissension; builders, planners, consumers and the business community all profess to be advocates of conservation.

Davis developed an energy conservation building code about five years ago to assure that new homes built there perform their basic tasks efficiently. The code is based on research that confirmed the correlation between a house's compass orientation and its indoor temperature. The researchers found that east/west-oriented houses and apartments are poor energy performers; dwellings aligned north/south, on the other hand, not only require drastically less summer air conditioning, but with proper shading, south-facing windows can capture heat from the winter sun and still keep out summer heat. In addition, houses oriented to take advantage of cooling breezes maintain comfortable indoor temperatures with less electricity.

Initially, public reaction to the new code was supportive—memories of the energy crisis were fresh. But the local construction industry was far from pleased by the prospect of new government controls; many builders feared the code would add substantially to building



*Several weeks before President Carter unveiled his new energy plan, Rosalynn Carter toured Davis, California. Aboard the most popular form of local transportation, she inspected the energy-efficient Village Homes development.*

Bill Brooks—Davis Daily Democrat



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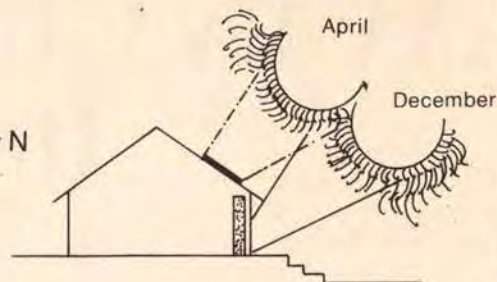
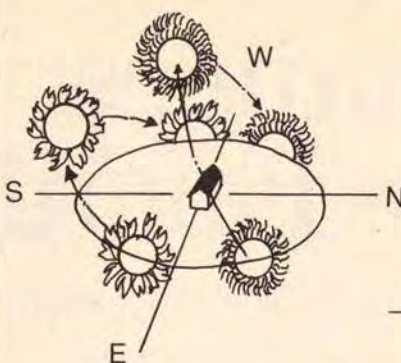
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The sun's trajectory in winter and summer

The angle of the sun's rays



A house built to face north and south allows maximum use of the sun for indoor temperature control. In summer, when the sun's path is higher relative to the horizon, south-facing windows can be shaded, for example, by an overhang. In winter, when the sun's path is lower, its rays are low enough to reach the windows below the overhang. Such window placement allows generous lighting with minimum indoor temperature variation.

costs, and some doubted the code could achieve the savings projected. Following a series of community meetings and city council hearings, the building code was adopted. Many of its specific building standards, which have been in effect since January 1976, are stricter than state standards. Davis' code, like the state's, gives builders a choice of how to meet those standards. Builders can meet prescribed structural standards or they can meet a more flexible performance standard. Someone who chooses to meet performance standards need not meet

each of the specific structural requirements of the code but must still attain the same level of energy efficiency.

In the few years since passage of the Davis code, local builders have lost their skepticism. In fact, a number have become enthusiastic boosters of the program. A builder who didn't believe the code would be effective hung thermometers in the first homes he built to comply with the code, to prove the city wrong. He changed his opinion when the houses maintained a 75-degree indoor temperature through 100-degree summer

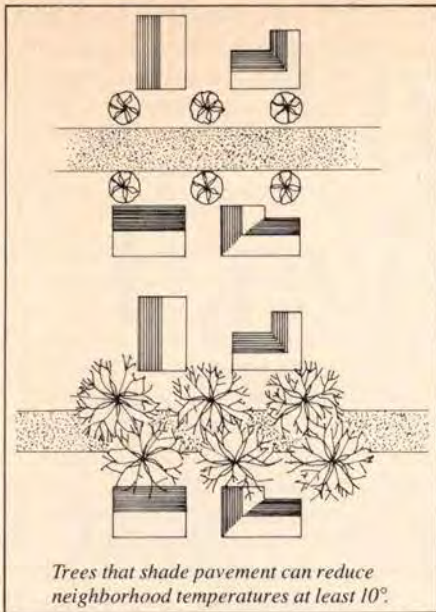
## Provisions of the Davis Building Code

Home-builders in Davis may choose either the performance or the prescriptive standards of the building code. To satisfy the performance standards, a finished house must conserve energy at specified levels. Most builders prefer to meet the prescriptive standards, which have been proven effective at keeping homes comfortable and efficient. These standards include the following provisions:

- Unshaded roofs and walls must be light-colored. Light colors reflect the sun's heat and keep interiors cooler during the hot Davis summer.
- Prevailing breezes in Davis are from the south on summer nights. If homes are not built to take advantage of this natural ventilation, mechanical ventilation must be provided.
- All south-facing glass must be

shaded during the summer months. Shade-screens, overhangs and landscaping are often used to give shade.

- Most building codes do not specify the maximum percentage of total area that windows may occupy, but the Davis code does. Basically, windows, skylights and other such glazing are limited to 12.5% of a house's floor area, but additional glazing may be added if double-pane or south-facing glass is used and/or if extra thermal mass (material that helps stabilize temperature by absorbing heat during the day and giving it off at night) is built into the home.
- Insulation in Davis residences must be rated R-11 in exterior wood-frame walls and R-19 in roofs and ceilings (the higher the number, the more effective the insulation). Suspended floors must also be insulated with a minimum of R-19 insulation.



days; now he speaks out for the energy ordinance.

Aware of possible energy savings, several builders routinely erect houses that far exceed the code's performance goals. In one solar home development, 70% of the houses have no need for air conditioners. Another builder constructed moderately priced homes that use solar energy for 90% of the space and water heating and 100% of the air conditioning needed.

The code has also endeared itself—via the pocketbook to home-buyers. The costs of meeting the code have proven to be minimal (\$50 for tract homes and up to \$700 for custom-built homes—less than 1% of the purchase price). Since annual utility savings average about \$150, the investment is returned in a few years. The city estimates that houses built under the new code require only 50% of the space heating and cooling required by houses built before 1976.

Seeing the results of its present regulations, Davis has adopted or is considering a number of further steps. Some of these steps clarify pre-1976 regulations; for example, the code encourages the use of south-facing windows for winter heating, so those windows must not be shaded. An old regulation that high fences must be twenty feet from sidewalks (and thus sometimes within a few feet of windows) constrained design of unshaded windows, so the setback rule was relaxed.

Other steps create new opportunities for conservation; the city council will soon vote on whether to require that new homes have plumbing connections for solar heaters, which would reduce costs for future homeowners who might decide

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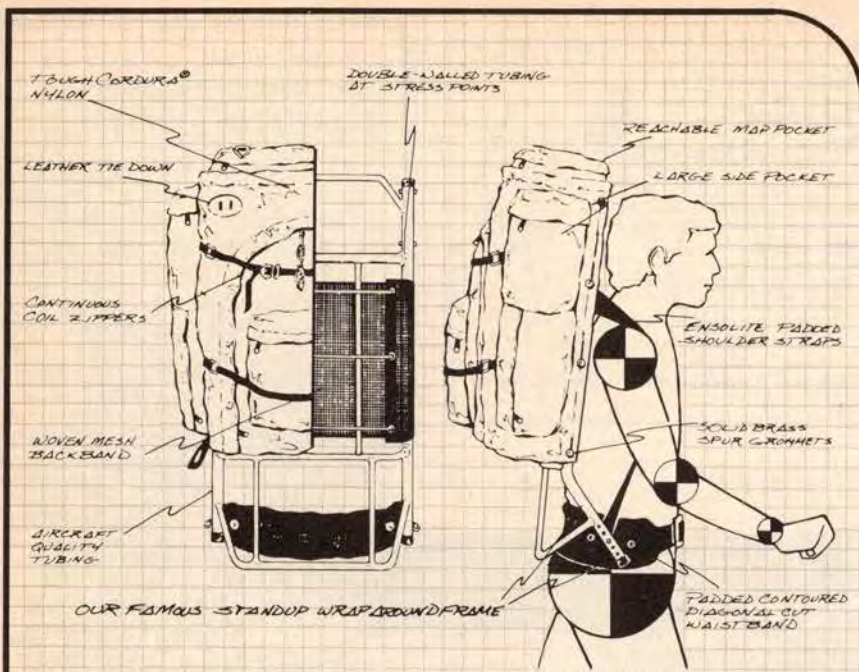
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to retrofit houses with solar water heaters. Noting another logical use of solar energy, Davis has obliged builders of all new multi-family developments to install clotheslines. Subdivision restrictions against "solar clothes dryers," as they have been affectionately called, are now illegal.

One of the major causes of energy consumption in Davis is unshaded streets and parking lots. Such areas collect and radiate a great deal of heat; the outside temperature on hot days can be ten degrees higher in unshaded neighborhoods. To remedy this condition, the city passed an ordinance requiring that trees shade at least 50% of paved parking lots, and city planners also encourage narrower streets in new subdivisions to minimize heat-absorbing surfaces and to conserve land.

The city council intends to vote soon on an ordinance requiring homes when sold to be retrofitted with energy-saving equipment. Depending on the house, the ordinance would call for insulation, weatherstripping, window-shading, solar heating, or other conservation devices.

Some city officials would like to see ordinances passed for commercial structures similar to those instituted for homes. Even without ordinances, the city currently ensures through a rigorous design-review process that conservation measures, including appropriate shading and building orientation, are applied to new commercial structures.

Public education has played an important role in the development and implementation of the city's energy plan. After the community meetings were held and the code enacted, and before cut-backs due to Proposition 13, the city systematically informed residents through a periodic newsletter of the latest additions to the city's energy program. It also offered more suggestions for energy conservation.

The Davis program has been emulated by many communities and, fine-tuned for climatic differences, could be implemented in every city in the country. If it were, the question, "coal or nuclear power?" that seems to dominate discussion at both the state and federal levels, could be answered, "neither, for now." And instead, political leaders could devote themselves to the task of ensuring that our energy future is compatible with our environment. □

*Katherine Alvord is a solar-project assistant for the League of California Cities. Mike Eaton lobbies on energy policy issues for the Club's Sacramento office.*

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# Ansel Adams, Environmentalist

ROBERT CAHN

ONE BLUSTERY DAY in 1936, a lanky, bearded young man toting a large portfolio strode up the steps of the Capitol and asked a guard where he might find the office of Hiram Johnson, the California senator. The guard took a long look at the gentle face with the heavy, black beard, bent nose and large ears, decided it did not belong to a spy, and pointed toward the elevator.

"My name is Ansel Adams, and I believe the Sierra Club wrote that I would be coming to see Senator Johnson," the young man hesitantly told an austere, black-garbed secretary. "I'd like to see the senator about his Kings Canyon National Park bill."

The secretary looked at the Sierra Club's introductory letter, consulted her appointment book and told the visitor he could come back Tuesday afternoon—"But the senator is very busy and will be able to see you only for a few minutes," she added.

In those days the name Ansel Adams did not instantly open doors to the inner sanctums of public figures. At the age of 34 he was only beginning to gain recognition in art circles and among conservationists for his photographs of the high Sierra. He had been a member of the Sierra Club's board of directors for two years, however, and his trip to Washington was initiated by his fellow board members, who had designated him to

represent them there at a conference on the National Park Service. His visit included another important mission as well, to show around his photographs of Kings Canyon and lobby for a bill to establish the area as a national park. A bill introduced the previous year by Senator Johnson was languishing in Congress, as had similar bills to give adequate protection to the magnificent Kings Canyon area.

When Adams met with Senator Johnson, he showed the senator 26 photographs made during two expeditions into the Kings Canyon wilderness adjoining Sequoia National Park to the north—pictures of granite peaks such as 13,570-foot Mount Brewer, clear alpine lakes and the Kings River canyon. As he



Ansel Adams c.1944

viewed the powerful photographs, the senator warned Adams that there was strong opposition from lumbermen, power and irrigation lobbyists, ranchers and hunters. He urged Adams to show the pictures and talk up the Kings Canyon park with as many congressmen as possible.

For a week Adams lugged his photographs around the Senate and House office buildings, showing them to more than 40 members of Congress and describing the need to preserve the giant sequoia trees and surrounding area.

As the Sierra Club's representative at the conference, Adams

met Interior Secretary Harold L. Ickes and other government officials and national conservation leaders. At the session on national park legislation, Adams was the first speaker, and he seized the opportunity to promote the proposed new park. Adams talked of an even larger concept, to combine into one unified national park all the high Sierra country from Yosemite through Sequoia, including the entire John Muir Trail. Outside the conference room, Adams' Kings Canyon photographs were mounted on large easels, giving silent testimony.

The Kings Canyon bill failed in Congress that year and again in the next Congress. Meanwhile, Adams combined his Kings Canyon and other photographs in a book, *Sierra Nevada: The*



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*John Muir Trail*. When it was published late in 1938, he sent a copy to Secretary Ickes. A few weeks later, Adams received an urgent letter from National Park Service Associate Director Arthur Demaray.

"Yesterday the Secretary took it [the book] to the White House," Demaray wrote, "and showed it to the President, who was so impressed with it that the Secretary gave it to him."

Adams sent a fresh copy to Ickes, who immediately wrote to him: "I am enthusiastic about the book you were so generous as to send me. The pictures are extraordinarily fine and impressive. I hope that before this session of Congress adjourns the John Muir National Park in the Kings Canyon will be a legal fact."

A year later, with President Roosevelt's support and arm-twisting, Congress passed a bill establishing a 454,600-acre Kings Canyon National Park, which F.D.R. signed on March 4, 1940. Adams downplays his influence in the long fight, for it was, after all, only one among many efforts by conservationists. Comments Adams: "I think my photographs of the Kings Canyon did have a helpful effect, but no one will ever know whether it was 1% or 5% or whether it was entirely imaginary." National Park Service Director Arno Cammerer, however, wrote to Adams in 1940: "A silent but most effective voice in the campaign was your own book *Sierra Nevada: The John Muir Trail*. As long as that book is in existence, it will go on justifying the park."

The influence Cammerer recognized 40 years ago was prophetic of the far-reaching impact Ansel Adams has had on the environmental movement. His passion for nature combines with the magic of artistic perception to translate light, shadow and form into transcendent statements of the earth's majesty. He has been called "the visual John Muir." In much the way that Muir's powerful writings and activism inspired people to take up the cause against the despoilers of nature in the late 19th century, Adams' photographs have awakened innumerable contemporary Americans to the need for keeping our wilderness and parks intact. More than a million of Adams' 40 books are in circulation. His photographs hang in art museums and galleries around the world. His workshop classes as well as his public lectures draw capacity audiences, and the young people who wear Ansel Adams T-shirts are among those who regard him with something akin to reverence. The man has become a legend in his own time.

The visitor from the East, arriving at Monterey airport, is astonished to see his host, the "legend," bound out of his middle-aged Ford, reach for the biggest pieces of luggage and start stowing them in the trunk. There is an exuberant warmth about the broad-chested, grey-bearded, six-foot Adams as he banters with a skycap, embraces his guest, then drives off toward his home overlooking the rugged California coastline at Carmel.

The house appears small as one approaches. But past the entry hall the living area opens to a massive and expansive scale that seems an appropriate setting for Ansel Adams. The two-



*A youthful Ansel clowns for the camera.*

story living room, lined floor-to-ceiling with native American and other crafts, art objects and hundreds of books, flows without interruption into an adjacent work area where a huge sorting table shares space with a grand piano, and the walls are lined with large, striking photographs. The room's massiveness is given human dimension by a few antique pieces, mixed with comfortable, homey chairs and sofas. These, along with the ready teapot, the colorful garden and a feeling one has of being amply cared for, bear the stamp of Virginia Adams, Ansel's wife of more than half a century.

A visit of several days at the Adams' leaves an impression of quiet but unceasing activity. From offices in the back part of the house come the sounds of staff members attending to Ansel's far-flung interests and correspondence. An assistant is busy in the darkroom, where Adams himself spends hours at a time. And from his own small office in one

corner of the house, one may hear, at any time of the day or night, the tap-tap of a typewriter on which Adams, thick horn-rimmed glasses pushed up on his forehead, is banging out some message to the President, the Secretary of the Interior, a senator, an art dealer or a conservation leader.

Ansel Adams' impact on the environmental movement is widely recognized. What may not be so well known is the extent to which his artistic career has been interwoven with the environmental movement. Sifting through events in his life and relationships over the past 77 years reveals a pattern of influence that has made a unique contribution to the growth of environmental consciousness in the United States.

Ansel Easton Adams, the only son of a well-off San Francisco couple, gained an appreciation for nature while growing up near the lonely sand dunes beyond the Golden Gate, and in summer trips to remote wooded areas on Washington's Puget Sound, where his grandfather had lumber interests. An unusually bright child, he was taken out of public schools by his parents and received most of his education at home. (Though he never earned a college degree or even went to a conventional high school, he has six honorary Ph.D. degrees.) He taught himself to play the piano when he was twelve, and his artistically inclined father saw that he received formal piano instruction. He seemed headed toward a musical career when, in the spring of 1916, his family took him on a trip to Yosemite Valley, and a chain of events began that eventually changed the course of his life. As he later recalled: "That first impression of the valley—white water, azaleas, cool fir caverns, tall pines and solid oaks, cliffs rising to undreamed-of heights, the poignant sounds and smells of the Sierra, the whirling flourish of the stage stop at Camp Curry with its bewildering activities of porters, tourists, desk clerks and mountain jays, and the dark green-bright mood of our tent—was a culmination of experience so intense as to be almost painful. From that day in 1916, my life has been colored and modulated by the great earth-gesture of the Sierra."

With a No. 1 Box Brownie, the fourteen-year-old tried to capture the beauty he saw. A year later, Adams was back at Yosemite with a better camera and a companion to teach him mountain lore. With Francis Holman, a Sierra Club member



Cedric Wright

Ansel instructing members of the 1935 Sierra Club high trip

and mountaineer, he spent three weeks hiking the high country.

"I'll never forget that first trip to Merced Lake," Adams recalls. "When we started out it was rainy, and I didn't see any mountains. The next morning, at dawn, I climbed a long tongue of granite to get my first view of the glowing sunrise on the warm-toned peaks. Seeing the quality of nature, hearing the sound of river and waterfall, everything seemed to mesh. I went back to the valley and wrote to my mother, 'This is it. I have to go back.'" And go back he did, year after year, accompanying experienced outdoorsmen such as Holman or violinist Cedric Wright, learning mountain lore from them and scrambling up valleys and high crags, seeking new vistas for his growing assortment of cameras.

Adams had his first official contact with the Sierra Club at age seventeen when he took a summer job as custodian for the Club's gathering point in Yosemite Valley, Le Conte Memorial Lodge—a job he held for five years. During that time he became acquainted with William E. Colby, who had taken up the Club's leadership after Muir's death. Under Colby's influence, Adams joined the Club in 1919. His first published photograph appeared in the *Sierra Club Bulletin* the following year.

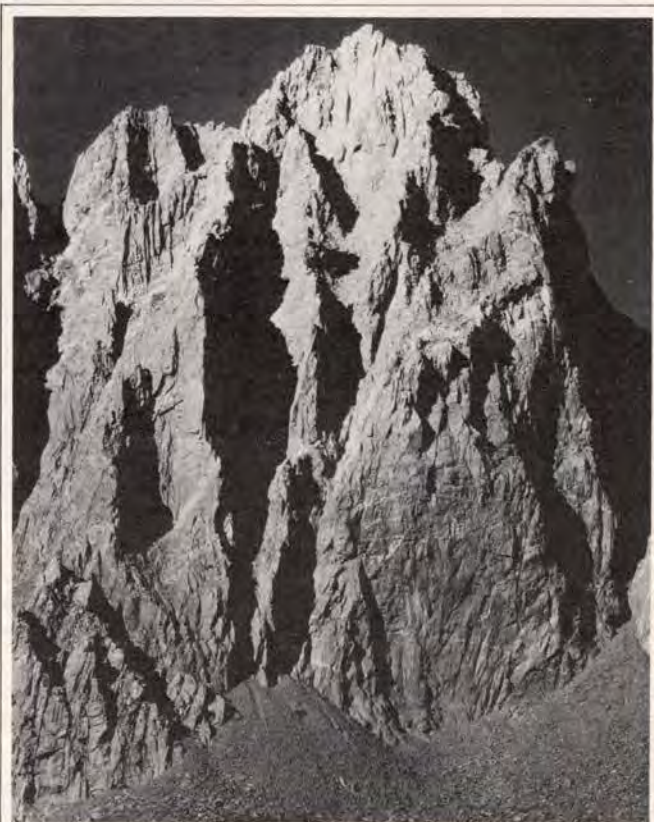
Adams was still diligently pursuing his musical career, and at every opportunity during summers in Yosemite he would rush over to Harry Best's art studio in the valley to practice for hours at a time on the Bests' piano. Besides the piano, Best's studio offered another attraction—the owner's daughter, Virginia. Ansel and Virginia fell in love, which further complicated his career choices and his life. Through a series of disasters, Ansel's family had lost its wealth, and neither piano teaching nor sales of his photographic services brought in enough income to support a wife or family. So their courtship extended over seven years.

Adams' photographic career took a quantum leap in 1926 when Albert Bender, an enterprising San Francisco friend of the wealthy and of artists, "discovered" Adams' photographs and decided they should be published. Bender selected a group of the prints and contacted a prominent San Francisco publisher who agreed to produce the portfolios. Then Bender got on the telephone and started to work.

"He called Mrs. Sigmund Stern [one of San Francisco's

great philanthropists]," Adams recalls. "Top of the morning, Rosalie. I have here in the office a young man who is both a wonderful musician and a wonderful photographer! His name is Ansel Adams and we're planning to get out a portfolio of his photographs of the High Sierra—fifteen fine prints. Grabhorn will do the typography. It's going to be stunning! Seventy-five copies at \$50 each. I'm taking ten. What about you?" Mrs. Stern also took ten. In a few hours, Bender had sold 56 copies sight unseen, and Adams' first published work, *Parmelian Prints of the High Sierras* [the publisher mistakenly pluralized the word Sierra], was on its way.

In 1928, encouraged by receipts from the sale of *Parmelian Prints*, Ansel and Virginia were married. It was the beginning of a lasting partnership that includes a shared interest in conservation. Virginia became a member of the Sierra Club board of directors in 1932. Then in 1934 someone nominated Ansel, and neither would allow the other to withdraw from nomination. They campaigned for each other, but Virginia's stated desire to retire to attend to the needs of their first child won the election for Ansel.



Mount Winchell, Kings Canyon National Park, c.1933

His photography work often took him into the mountains accompanied only by a mule laden with camera gear and supplies. Adams also accompanied Joseph N. Le Conte and his family on long trips into the Kings Canyon area in 1924 and 1925, went on his first Club outing in 1927 into the Sequoia National Park region, and acted as Sierra Club photographer during the 1928 outing in the Canadian Rockies. In 1930 he became assistant manager of the outings, which in those days consisted of month-long trips for up to 200 people. "I was in charge of mountain climbing, of setting up the commissary for each day's camp, of keeping track of where everyone was and making sure no one got lost," says Adams.

He also gained a reputation of sorts for his wit and charm as

master of ceremonies for the evening campfires. During 1931-1933 outings, Adams wrote and produced a series of mock Greek tragedies that poked fun at life on the trail and at camp.

The 1931 epic "Exhaustos" had a one-night stand at Benson Lake and featured such characters as King Dehydros of Exhaustos, his daughter Clymenextra and the chorus of Weary Men and Sunburnt Women. Adams supplied some of the costumes, such as earrings made of exploded flash bulbs for Clymenextra. And clad in a near-white blanket fastened by a huge safety pin, twanging a lyre of forked branch and strings, Adams played the narrator, "The Spirit of the Itinerary." On the 1932 outing, he wrote, directed and narrated a sequel, "The Trudgin' Women."

Adams supplemented his sparse photographic earnings by working seasonally for the Yosemite Park and Curry Company, the major concessioner. The job involved photographing socially prominent visitors and doing other publicity work—for \$10 a day. He also made scenic photographs for advertising and promotion.

The Sierra Club meantime was the central focus of his interests. He wrote frequently for the *Bulletin*, and at board meetings he launched numerous proposals for improving parks and wilderness. He tried especially to spur the Club to become more involved in environmental issues and to move away from its early image as a clique of preservationists who took month-long summer "vacations" in the Sierra. He had for some time been pushing the board to appoint a full-time executive director who could give guidance and momentum to the Club. When the board finally agreed, Adams exerted considerable influence in getting David Brower, the Curry Company's young publicity manager, appointed.

In the course of his photography trips Adams became increasingly disturbed at the way California's unique natural areas were being spoiled by unbridled development and other pressures of growing population. One effect was fewer areas where California's spectacular wildflowers could be observed. In 1934 he put on an impromptu Yosemite Wildflower Festival. "I wanted to call attention to the issue and show that disappearance of the flowers in some areas was symptomatic of greater problems, including loss of habitat for wildlife and the ruination of landscapes," Adams says.

The festival was mildly successful, and the following year he organized a Conservation Convention and Wildflower Festival. This time he drew together an organizing committee that included the president of the Sierra Club, the superintendent of Yosemite National Park, representatives of the Forest Service, the Save-the-Redwoods League, the state parks and highway commissions and several other groups. "I was trying to strengthen the limited capabilities of individual conservation groups," he says, "by bringing them together with other public groups with whom they could take unified stands on conservation issues."

On the photography front, during the 1930s Adams gradually gained the respect of the day's photographic greats such as Alfred Steiglitz, Paul Strand and Edward Weston. Through Albert Bender and others, he met many noted writers and artists—Lincoln Steffens, Robinson Jeffers, Georgia O'Keefe. Adams collaborated with poet Mary Austin in 1930 on *Taos Pueblo*. Produced in limited edition, it received praise and extended Adams' range as a photographer.

A trip to the Southwest in 1930 became a turning point when he visited Taos, New Mexico, where he met the vacationing Strand. Looking over Strand's shoulder as he held up to the light some of his recent negatives, a whole new world opened to Adams. He saw negatives that were distinguished by their

great clarity of composition. The then-popular "pictorial" photography, featuring carefully contrived composition, soft-focus lenses, textured papers or other methods of manipulating the image, lost any appeal it may once have had for Adams. "I saw now how powerful the image could be when all of the photographer's esthetic and technical forces were brought into play in a convincing interpretation of what was outwardly seen and inwardly felt."



Ansel photographing the Sierra Nevada in 1941, on the road to Independence Pass near University Peak

This new view finally led Adams to forsake music and choose photography as the field in which he could best express himself, though some say there is music in his photographs. Susan Littlewood, photographer and art critic, has written that "Adams' photographs have music in their enormous tonal range. Light and shadow often are dramatically composed in crescendo and diminuendo, compelling one metaphorically to listen as well as to look."

Recognition grew rapidly—one-man shows with excellent reviews at the Smithsonian in 1931, at San Francisco's de Young Museum in 1932, and the San Francisco Museum of Art in 1933, at museums and galleries in Buffalo, N.Y., Dayton, Ohio, and at Yale University.

Adams was still not widely known to the general public, however, and artistic recognition had not expanded the Adams family pocketbook. Ansel and Virginia had a small income from her father's studio in Yosemite Valley, which she inherited in 1936. Publication of *Sierra Nevada: The John Muir Trail* in 1938 brought praise from critics and public officials, but it, too, was a limited edition of only a few hundred copies. Photographic jobs for industry kept the by-then two-child family barely solvent—Adams always spent more time on a project than the income from it justified.

"Quality and the purpose of a task have always been more important for Ansel than money," says Virginia. "If anyone wanted a print for any conservation cause he would give it. He does things not to advance himself, but because he thinks they are the right thing to do. He has a tremendous sense of personal responsibility for everything he does and feels that he has to do it well."

Adams also puts a great deal of effort into writing, but his writings are relatively unknown except to those who have read his numerous contributions to early issues of the *Sierra Club Bulletin*, or to those who can draw their eyes away from the photographs and read the text he has written in his books.

The 1932 *Bulletin* carries a delightful sample of the Adams literary style and content, as he recounts the experiences of the 1931 Club outing in Yosemite:

"It was the first day of the outing—you were a little tired and dusty, but quite excited in spite of yourself. You were already aware that contact with fundamental earthy things gave a startling perspective on the high-spun unrealities of modern life. No matter how sophisticated you may be, a huge granite mountain cannot be denied—it speaks in silence to the very core of your being. There are some who care not to listen, but the disciples are drawn to the high altars with magnetic certainty, knowing that a great Presence hovers over the ranges. You felt all this the very first day, for you were within the portals of the temple. . . . You were aware of Sierra sky and stone, and of the emerald splendor of Sierra forests. Yet, at the beginning of your mountain experience, you were not impatient, for the spirit was gently all about you as some rare incense in a gothic void."

And one who knows Adams can perceive the twinkle in his eyes as he writes about the first dinner of the outing, and getting your spoon, ". . . a sort of visa to all subsequent meals. If you lose it, you are in for diplomatic difficulties of no mean degree. The spoon is the insignia of the order; without it you are disenfranchised and helpless. It usually reposes between the sock and boot-tip, but some are drilled and hang on the bearers' bosoms like medals. Literally, you are born into the Sierra Club with a steel spoon in your mouth."

No slouch as a rock climber in his youth, Adams pays tribute to the accomplishments of those who made ascents of difficult peaks. Then he pauses for perspective: "Rock climbing, as such, should be accepted with the greatest enthusiasm; yet I feel that certain values should be preserved in our contact with the mountains. While it is rarely a case of the complete ascendancy of acrobatics over esthetics, we should bear in mind that the mountains are more to us than a mere proving ground of strength and alert skill. The aim of our appreciation of the mountains is an elaborate metaphysical equation, the solution of which is implied most clearly in these words of Whitman—

. . . while the great thoughts of space  
and eternity fill me

I will measure myself by them."

Adams prefaces his photographs in *My Camera in the National Parks* (1950) with an essay, "The Meaning of the National Parks." In it he writes: "The heritage of the earth . . . provides us with physical life. We have, in part, mastered its resources and believe we are able to extract therefrom what is required for millenniums to come without exhaustion of the source. We are now sufficiently advanced to consider resources other than materialistic, but they are tenuous, intangible, and vulnerable to misapplication. They are, in fact, the symbols of spiritual life—a vast impersonal pantheism—transcending the confused myths and prescriptions that are presumed to clarify ethical and moral conduct. The clear realities of nature seen with the inner eye of the spirit reveal the ultimate echo of God."

For the last half-century, Adams' principal environmental interest has been in protecting and expanding wilderness and in upholding the national park ideal wherever it may be in danger. An assignment from Secretary Ickes that began in the late 1930s took Adams across the nation for photographs of national park scenes to be used as photomurals for the Interior Department headquarters and for various parks.

With two grants from the John Simon Guggenheim Memorial Foundation after World War II, Adams extended his travel in major national parks and monuments to gather material for a book. On occasion, he would write to Ickes or to Park Service

directors Cammerer and Newton Drury about problems he encountered. One issue that has bothered Adams for years is the poor quality and bad taste of souvenirs sold in the national parks. An analysis Adams researched and wrote for Cammerer in 1938 was accepted as policy, but to this day it has not been implemented.

"I realize that most park visitors want to take something tangible away with them as a memento of the experience," says Adams. "In earlier days people could buy authentic relics of Indian culture or real pieces of stone and petrified wood, foliage or the like. But the supply of natural legitimate objects could not keep up with the demand. So the commercial souvenir appeared. There was mass manufacture of phony Indian material as well as pennants, pillow-cases, dolls, even hip-flasks, all with the appropriate park label. I don't blame the shops for selling these profitable items, inasmuch as nothing else exists to sell.

"Back in 1938 I suggested—and still would like to see—a cooperative program among the government, manufacturers and concession operators to make appropriate quality souvenirs available and replace the popular curios gradually."

Virginia and Ansel Adams practiced this preaching at their concession at Yosemite. When Virginia began operating it in 1936, she immediately sold off the existing stock of curios to the Yosemite Park and Curry Company, and for the last 40 years the studio has sold only native American Indian rugs, pottery, baskets and other hand-crafted items of lasting value, in addition to film and Ansel Adams' prints and postcards.

In his post-war travels through the national parks, Adams was troubled by the extent to which the limited facilities were devoted to boating, water skiing and other water-based activities. So he began waging a behind-the-scenes campaign to get the National Park Service out of the "recreation" business.

"I thought we should let those whose leisure needs were centered on water sports or on golf, skiing and the like, leave the national parks to people who valued stillness, scenic grandeur and other features unique to the parks," comments Adams. "I remember that after the war I wrote Secretary Ickes, warning him that the parks could be ruined if the pressures for more roads, resort facilities and penetration into the wilderness were not alleviated. I suggested that the government develop more facilities at federal reclamation projects such as Shasta, Boulder, Friant and Bonneville dams. Ickes wrote back to me that Newton Drury had already reported on the dangers to the parks from recreation pressures. Ickes wanted amusement facilities kept to a minimum in national parks and not used to promote profitable patronage."

In the 1950s Adams and the Sierra Club collaborated on a project that resulted in wide-ranging benefits to both, as well as to the conservation movement. It began in 1955 when the National Park Service notified the Club that, since Le Conte Lodge was providing no particular service to the public, it should be turned into a geological museum. Adams felt that the Club's presence as a conservation organization was needed in the park. He convinced the board of directors that in order to prove the lodge's usefulness, the Club should stage an exhibit there, explaining its conservation approach.

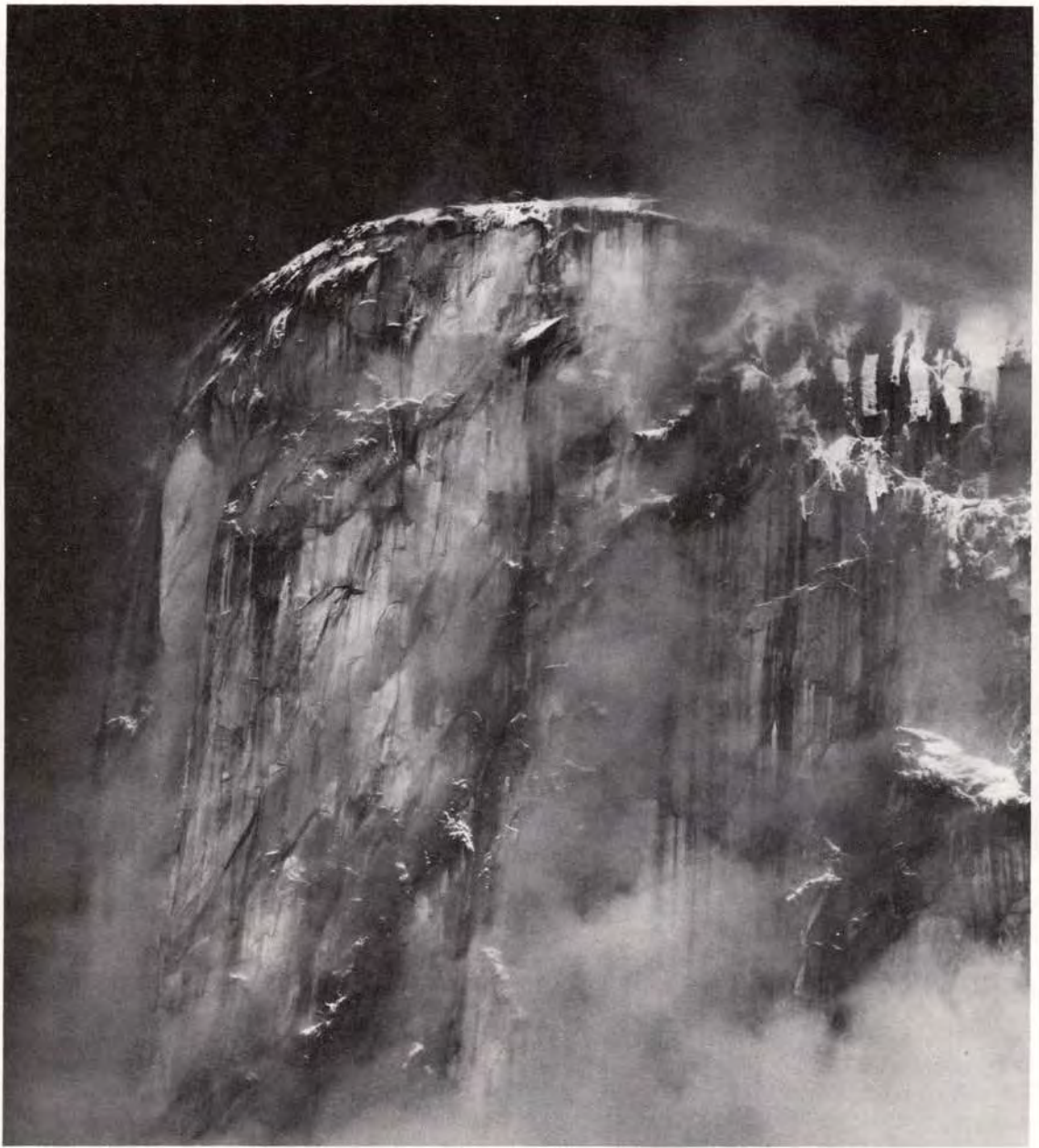
"What I had in mind," Adams recalls, "was to show the importance of the spiritual values as well as the material ones. A lot of people thought conservationists were a bunch of long-haired crackpots and wild-eyed mystics. We wanted to give people a chance to understand the broad principles and the full scope of the things for which we were fighting."

*Continued on page 45*



*Trees and Cliffs of Eagle Peak, Winter, Yosemite Valley c. 1935*

*Horace Adams*

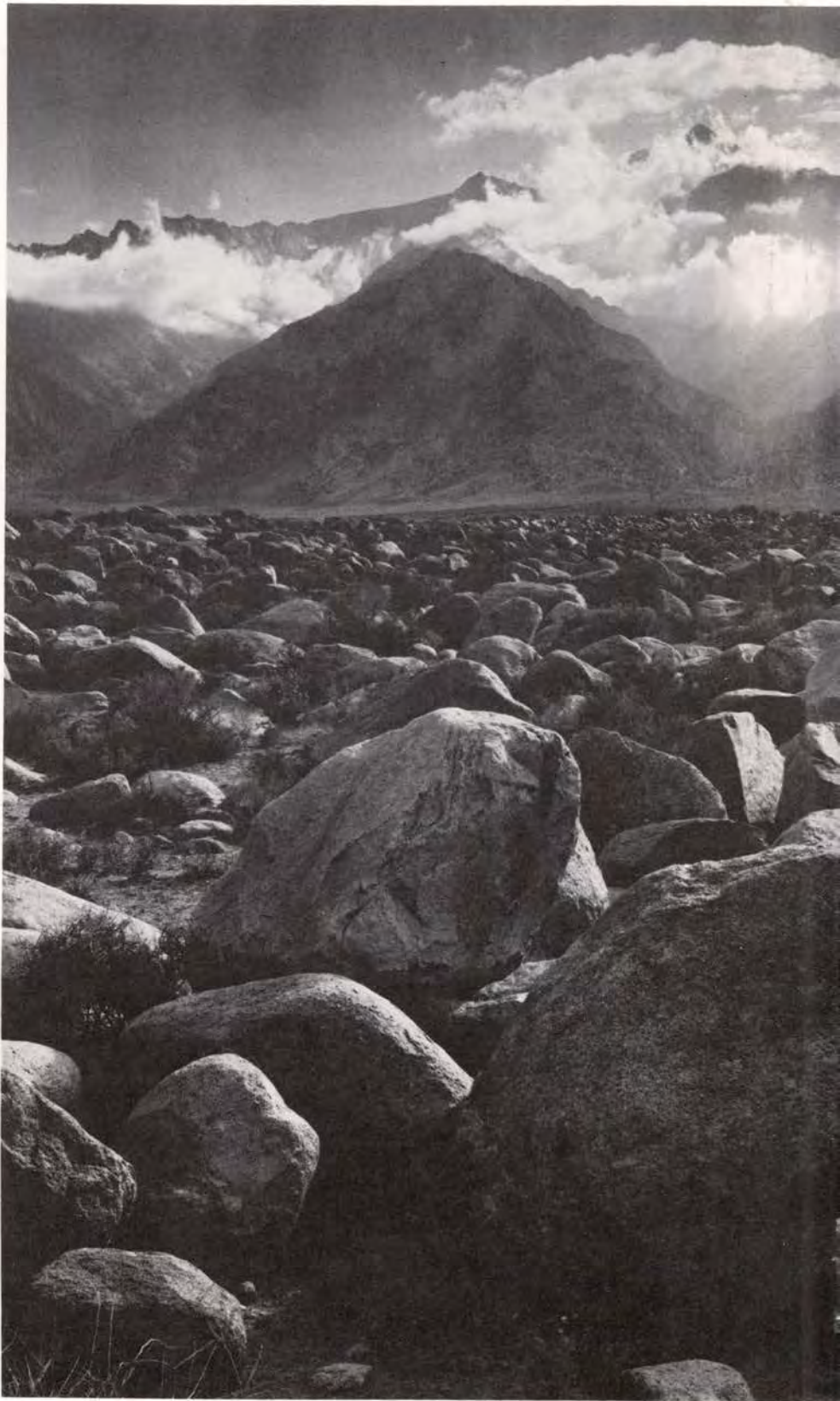


*Summit of El Capitan, Clouds, Yosemite National Park c. 1970*





*Moro Rock, Sequoia National Park and Sierra Foothills c. 1945*



*Mount Williamson, Sierra Nevada,*



*from Manzanar, California c. 1944*



*Siesta Lake, Yosemite National Park c. 1958*



*Sequoia Gigantea Roots,  
Yosemite National Park c. 1950*



*Frozen Lake and Cliffs, Sequoia National Park c. 1932*



*Metamorphic Rocks and Summer Grass, Foothills, Sierra Nevada c. 1945*

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From  
*Yosemite and the Range of Light,*  
to be published by the  
New York Graphic Society  
September, 1979.

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The board appropriated \$1600 and hired Nancy Newhall, a fine writer experienced in arranging exhibits at New York's Museum of Modern Art. She developed an exhibit for the lodge entitled "This Is the American Earth." Newhall and Adams borrowed negatives from leading photographers—Edward Weston, Margaret Bourke-White, Eliot Porter, Henri Cartier-Bresson, William Garnett, Werner Bischoff. Adams made most of the prints, donating his time to helping prepare the show's fourteen 7-by-4-foot panels, including many of his own photographs. Newhall wrote a lyrical text in free verse to accompany the photographs.

The overall effect was a mood-setting panorama of the natural and human values that give meaning to democracy and freedom. One panel, for instance, shows the contrasts of morning light on the east side of the Sierra, shadowed foothills, and a horse grazing in the foreground, with Newhall's text: "This, as citizens, we all inherit. This is ours, to love and live upon, and use wisely down all the generations of the future."

Crowds of visitors packed Le Conte Lodge all summer, and Adams acknowledged in a September 1955 letter to a friend that the exhibit "seems to have achieved its objective and I hope it will continue to function." This was a vast understatement. Within a year it had been shown at the Academy of Science in San Francisco, Stanford University and the Smithsonian Institution. The Smithsonian Traveling Exhibition Service made copies of the exhibit and showed them throughout the nation over the next seven years, and the United States Information Service displayed copies around the world.

"Then we got the idea for a book. Dave Brower was enthusiastic and worked with us to plan and design it in a large size that set off the photographs and text effectively," says Adams. "Nancy Newhall expanded her text, and Brower wrote a wonderful introduction."

*This Is the American Earth* became a huge success. "One of the great statements in the history of conservation," Justice William O. Douglas called it. The *Phoenix Gazette* said it "may become one of the most nationally significant books of the decade, for more powerfully than a thousand technical works could, it pleads for man's understanding that the wild earth is his home." More than 17,000 copies were sold, plus another 80,000 copies of a paperback edition.

Its importance goes beyond its critical acclaim and the numbers of copies sold. The concept of a large "art" format for an environmental book, born with *This Is the American Earth*, spawned the Sierra Club's trend-setting exhibit-format series. A total of fifteen other exhibit-format books were published by the Club in the ensuing seven years. Not only were these books effective spokesmen for the Sierra Club, they were important for the growing environmental movement.

During the Sierra Club's period of growth and widening involvement in issues during the 1950s and 1960s, Adams made his presence felt on the board, but he was not a leader. "He refused to consider the presidency because he didn't feel equipped for the job," says Richard Leonard, a fellow board member for many years. "He didn't get much into national conservation measures. But he acted as the conscience of the Club." Adams developed the reputation within the board as a conservative on many matters because he wanted to find ways of resolving controversies with such federal agencies as the Forest Service, or with industry. Some board members, along with Executive Director Brower, preferred to wage more fron-

tal attacks. Adams opposed what he called the "kicking them in the shins" method. "It hurt him," says Leonard, "to see leadership of the Club pass for a while into bitter antagonism to the land protection agencies, instead of supportive negotiation based on reason."

In the early 1960s, when Pacific Gas and Electric sought to condemn land at Nipomo Dunes, California, to build a large nuclear power plant, Adams and some board members insisted the dunes should become a state park (which they later did). When PG&E decided to try the next logical site to the north, at Diablo Canyon, Adams sided with those on the board who felt that since the company was required to plan for electric power for the future and had to build somewhere, the Club should not object to the Diablo Canyon site. But Brower and others continued to fight PG&E, even after construction started. As it turned out, the Diablo Canyon plant, now ready for operation in 1979, is more controversial than ever because of newly discovered evidence that it is near an offshore earthquake fault. Some Club members criticize Adams for his conciliatory position then and his refusal, even now, to denounce nuclear power development.

Adams' tendency to take a back seat and let others lead has not held true in all cases. When an issue has assumed major significance for him he has taken a vigorous and publicly visible role. One such instance occurred in the late 1960s over the actions of Executive Director Brower. Despite their long friendship, Adams and Brower came to a parting of the ways over Club policy and management, a schism that received national publicity during the 1969 Club elections.

For the first time in Club history, rival slates were formed for the annual election of board members. Candidates backing either the Brower or the Adams slate actively campaigned, and members were deluged by literature on behalf of one candidate or another. The Adams slate won overwhelmingly and, with the resulting majority on the board, Brower was dismissed.

The controversy did not destroy the Club as some observers had predicted, but it resulted in severely strained relations between Adams and Brower. Time has softened the edges of the rift, though each still believes his own position was correct. "I never had any question but that Ansel was acting in what he thought were the best interests of the Sierra Club," Brower told me. And says Adams, "I just thought he was wrong. It was



At one time, Ansel contemplated a career as a professional musician; he still plays regularly.

never personal. Brower's contributions to conservation were, and still are, enormous."

An earlier example of Adams in an activist role developed over a proposal to improve 21 miles of the old Tioga Pass road, which goes through Yosemite National Park. Although some people opposed the original plan for a wide, high-speed road, the Sierra Club directors realized it was inevitable that the narrow, dangerous road crossing the Sierra had to be widened or there would be pressure for an entirely new trans-Sierra road. After much discussion with public officials, the Club reluctantly accepted assurances from the National Park Service that a relatively narrow (18 to 20 feet wide, with 2-foot shoulders), scenic, low-speed road would be built near Tenaya Lake.

But on a hiking trip to the lake in 1958, Adams was outraged to discover that one of the most beautiful parts of the Sierra was being desecrated. The rare and beautiful glacial polish alongside Tenaya Lake was being blasted and bulldozed to make way for a 36-foot-wide, high-speed road right alongside the lake.

Something had to be done immediately to stop this desecration. Adams tried to get the Sierra Club board to pass a resolution to get the road construction halted and alternatives considered. But his fellow directors believed it was already too late, so Adams launched his own campaign. He submitted his resignation from the board so he could speak without representing the Club, then sent a strongly worded telegram to Interior Secretary Fred Seaton, Commerce Secretary Sinclair Weeks and National Park Service Director Conrad Wirth.

The telegram succeeded in bringing federal officials to Yosemite within days, followed by an inspection visit by

Wirth, who ordered a temporary halt in construction while an investigation took place. Adams continued his campaign, seeking national support. He wrote articles for the *Bulletin* and *National Parks Magazine*. He saw the Tenaya situation as an example of all the development dangers then threatening national parks and wilderness.

The supreme problem, Adams wrote in the *National Parks Magazine* article, "is how to depressurize the parks and return them to their logical status. There are many parks which do retain their marvelous primal quality . . . but not Yosemite Valley and Tenaya Lake. It is true that in terms of proportionate area, much of Yosemite is wild. But a blemish on the face of Venus is a serious matter, beyond the proportion of the area it occupies! The fact remains that Yosemite Valley, Tenaya Lake and Tuolumne Meadows have been violated and may provide a source of infection which may soon invade not only the remaining wild areas of Yosemite but other parks and wilderness areas as well."

Adams' campaign to save Tenaya failed. Work on the highway started anew, with only a few minor concessions made by the road builders. And Adams feels if he had acted earlier and more forcefully, he might have prevented the damage. But although he lost his Tenaya fight, he did not lose his membership on the Sierra Club board. It refused to accept the resignation he had tendered at the start of his Tenaya battle.

Within the Sierra Club, Adams became a watchdog on national park issues in general and Yosemite in particular. In 1957 he wrote to Sierra Club President Harold Bradley expressing his distress at the apparent lack of concerted purpose within the directorate of the Club.

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Photo by L. Edwards, National Park Service

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"I wanted the Club to press for an immediate moratorium on all development within the parks, subject to extensive study by experts appointed by the Secretary of the Interior," says Adams. "Park master plans needed to be subject to public discussion before they were adopted, resort 'come-ons' removed and roads designed for slower, scenic use. The Park Service should cease publicizing the national parks for the benefit of its own prestige, and park functions should be scaled to the number of people who would visit the parks for their intrinsic qualities."

When Conrad Wirth was succeeded in 1964 by a new director, George Hartzog, Jr., Adams found a more receptive audience for some of his ideas. The nightly "firefall" at Yosemite, an artificial event that attracted crowds into the Valley, one that Adams had opposed for many years, was abolished. Adams was appointed to a committee preparing new park road standards. And he continued chiding the Park Service for allowing concessioners to dominate park policy in some places.

In 1968 Secretary Stewart Udall awarded Adams the Conservation Service Award, the Interior Department's highest civilian honor, "in recognition of your many years of distinguished work as a photographer, artist, interpreter and conservationist, a role in which your efforts have been of profound importance in the conservation of our great natural resources."

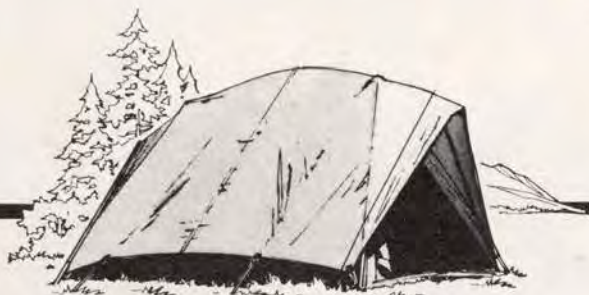
Adams resigned from the Sierra Club board in 1971 after 37 consecutive years of service. He had long felt that the changing times required directors with the skills to meet more diverse demands—and that younger members should replace the old guard. In his letter of resignation Adams wrote to Club President Raymond Sherwin that since the Club had developed

into a large and potent national organization, "it is imperative that the governing body—the directors—be composed of experts in the important fields of law, politics, science and finance. I do not fit in any of these categories; my contributions have been in the fields of creative photography and the interpretation and esthetic appreciation of the natural scene."

Although no longer on the board, Adams' interest in conservation and the environment continued. He served on the Park Service's civilian advisory board that helped prepare a new master plan for Yosemite. He continued his pressure on federal officials to reduce development in national parks. He argued for the eventual elimination of all private concessions (including the studio, now called the Ansel Adams Gallery) and the gradual substitution of non-profit private corporations operating under governmentally imposed standards. Adams also continued his contacts with Interior Department secretaries and Park Service directors.

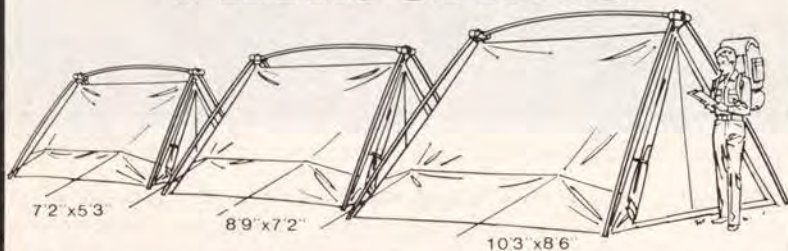
But Adams had never met a President of the United States until 1975. Early that year White House photographer David Hume Kennerly showed a copy of the new book *Ansel Adams: Images, 1923-1974* to Mrs. Ford. She was so impressed that she took it to the President. Kennerly wrote to Adams, who immediately sent a large print of "The Clearing Winter Storm, Yosemite National Park" to the Fords, which the President had particularly admired. It was a short time later that Adams accepted an invitation to the White House for the purpose of discussing national park issues with the President.

When Adams and his business manager, William A. Turnage, were ushered into the Oval Office, Adams got right to the point. He told Mr. Ford that the parks had not been receiving



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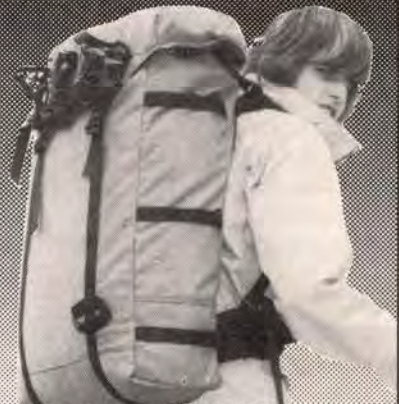
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the presidential support that the times required. "We should look to the future," he said, "and in what better way than by creating a whole new era in the national parks?"

Ford replied: "Well, if any President has a feeling for the parks, I should. After all, I don't know of any other President who was a park ranger."

After the half-hour meeting, Ford showed them the winter storm photograph hanging on a wall nearby. "Mr. President," said Adams, "every time you lean back in your chair, that picture is going to remind you of your responsibility to do something for the national parks."

Ford laughed and turned to Turnage, saying: "He doesn't think I got the message."

President Ford declined to take new initiatives, but a year later, in a speech at Yellowstone National Park, the President promised to reinvigorate the Park Service by adding 1000 new jobs and creating a \$1-billion Bicentennial Land Heritage Program with which to create additional parklands. Although Ford sent the proposal to Congress in September, it was too late for action. The outgoing Ford budget included funds for the new employees and partial funding for the new Land Heritage Program, which Carter accepted and backed in slightly modified form.

Although elected an honorary vice president of the Sierra Club last year, Adams believes his present role should be that of a silent elder statesman. While he may have personal opinions about directions for the Club, he no longer seeks an active role. These days, one of his chief environmental activities is the Big Sur Foundation, which he helped start in 1977 to find the best way to preserve the remaining unspoiled lands along a 90-mile stretch of spectacular California coastline from Carmel to San Simeon. He also watches the evolution of the new Yosemite Park master plan like a mother hen. Shortly after the release of the draft management plan last fall, he sent a strongly worded letter to Secretary Andrus.

"Not only is it a weak plan, but it is a dangerous one," Adams wrote. "It solves no basic problems. It sounds wise and efficient, but when examined it is only a slight reshuffle of the status quo. . . ."

"In my simplistic approach I feel the only answer is for the government to buy out the concessioners and lease the operations to qualified operators under strict levels of taste and capability."

Another long-standing concern of Adams is that the term "park" gives the wrong semantic impression as to how these great natural areas should be used. He suggests they be called "reserves" instead.

"Most Americans equate 'park' with Central Park, Golden Gate Park or their local park centered around a bandstand," Adams says. "The dominant theme is relaxation and recrea-



*Clearing Winter Storm.*

tion. There's nothing wrong with that when it is applied to an area set aside for that purpose. But the term 'reserve' would mean that the place is reserved for its inherent qualities and can be used in an appropriate manner."

In the 1970s Adams has at last achieved the financial security that had always eluded him. The book that so impressed President and Mrs. Ford exhausted its entire run of more than



Yosemite National Park, c.1944

25,000 copies at \$65 each, as well as 1000 copies of a special \$250 edition. Adams' latest book, *Yosemite and the Range of Light*, will be published this September. He is also starting work on his autobiography, to be published in 1982. And he is completely rewriting his Basic Photo Series, five books on the technical aspects of photography that are standard references.

Another change has been a financial arrangement that allows him to avoid spending most of his time making prints of a handful of his most popular negatives. In mid-1974 Adams and Tur-

nage, now executive director of the Wilderness Society, decided that beginning in January 1976 Adams would accept no more print orders, and they set a gradual price increase for his 16-by-20 prints, from \$350 to \$800 at the cut-off date. Several galleries placed orders for hundreds of prints, one gallery for 1000.

A single print may take Adams an entire day, or longer, until he gets results that satisfy him—and he does all of his own printing. For Adams it is the final event of a process that starts with what he calls a “visualization.”

“In photography, you have an external event, but just going ‘click’ doesn’t mean that the image is going to convey that to you,” Adams explains. “The internal event is the putting of what you observed into an image, that is where the esthetics come in. The result can be a shallow record, or it can be a profound statement. I can see the print even before I trip the shutter.

“When I come across something I recognize as being esthetically valid, I see in my mind’s eye a picture. I see the values of light, the shapes, the relationships. I am supposed to have enough technique to translate that visualization into an exposure scale so that I will get the information on the negative.

“The negative is like the composer’s score. The prints are the performance. I can deviate from the score just so much, but more than I thought I could twenty years ago. As you work with the negative you can get a further insight, just as if, playing Bach or Beethoven, you hear something you never heard before.”

The number of people who have been turned on to conservation simply by looking at Ansel Adams’ photographs will never be known. And one can never assess how many of those went on to inspire other people to join the cause of conservation. Adams values a letter he received ten years ago from then-Northwest Representative of the Sierra Club, Brock Evans, who is today head of the Club’s Washington office.

“You are in a most direct way responsible in large part for my love of the land and my passion for my job,” wrote Evans. “I was born and raised in Ohio, and never really had much contact with raw, wild nature until the spring of 1961. I was just finishing my first year at the University of Michigan Law School, and I happened to pick up a copy of *Yosemite*, that

beautiful book. . . . It was like another world, and the words and pictures stunned me and moved me more deeply about nature than I ever had been before. . . . You were a hero to me, as you must be to many, many others, long before I knew you. That beautiful book helped to change my life in ways that I still only vaguely understand.” □

*Robert Cahn, a Pulitzer Prize-winning writer for the Christian Science Monitor, now writes for Audubon. He was one of the original members of the Council on Environmental Quality.*

# SIERRA CLUB OUTINGS

## It's Not Too Late to Sign Up for a 1979 Outing

A large number of Sierra Club 1979 outings are filled, with waitlists for some, but many outings are still available. If you act promptly, you can probably find space on any of the trips listed below. Please refer to pages 56 and 57 of the 1979 Outing Catalog for application form, reservation instructions and deposit/cancellation/refund policy information, and page 53 of this issue of SIERRA for an outings information order coupon.

Look for a special Outings section describing next year's Foreign trips in the July/August SIERRA and a listing of 1980 Spring trips in the November/December issue.

Trip Number	E = Educational outing • = Leader approval required	Date	Trip (Incl. Deposit)	Deposit	Leader
<b>ALASKA</b>					
52	•Kenai Peninsula Knapsack/Highlight	July 2-14	515	70*	Bill Huntley
55	Sailing Prince William Sound	Aug. 10-16	485	35	David Finkelstein
	*Per person deposit				
<b>BASE CAMPS</b> (See Wilderness Threshold, Alaska, Hawaii, Canoe and Ski Touring for other Base Camps.)					
60-E	Natural History of Mono Basin, California	June 16-23	160	35	Ray Des Camp
61	Dorothy Lake, John Muir Wilderness, Inyo Forest, Sierra	July 7-14	170†	35	Dick May
63	•Rock Creek Mountaineering Camp, Inyo Forest, Sierra	July 14-28	275	35	Sy Ossosky
66	Rangeley Lakes, Maine	July 29-Aug. 4	185	35	Connie Thomas
67	Fremont Lake, Toiyabe Forest, Sierra	Aug. 2-9	170†	35	Serge Puchert
69	Fremont Lake, Toiyabe Forest, Sierra	Aug. 9-16	170†	35	Dick Raines
71	Woodchuck Country Alpine Camp, John Muir Wilderness, Sierra Forest	Aug. 19-31	255	35	Bob Miller
72-E	Christmas at Organ Pipe Cactus Monument, Arizona	Dec. 23-Jan. 1, 1980	205	35	Ray Des Camp
	†Children under 12 \$150				
<b>BICYCLE TRIPS</b>					
80-E	•Eco-cycling, Southeast Minnesota and Western Wisconsin	June 17-30	170	35	Sherie Mentzer
81	•Maui by Bicycle, Hawaii	June 25-July 9	425**	35	John Finch
82	•Bicycle Tour of Kauai, Hawaii	Aug. 6-20	415**	35	Phil Coleman
83	•Cape Cod and Martha's Vineyard, Massachusetts	Sept. 2-8	165	35	Bill Dunbar/Betsy Griscom
	**Trip prices do not include airfare.				

Trip Number	E = Educational outing • = Leader approval required	Date	Trip (Incl. Deposit)	Deposit	Leader
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## BURRO TRIPS

90	Green Creek to Tuolumne Meadows, Yosemite Park, Sierra	June 30-July 7	220	35	c/o Jack Holmes
91	Tuolumne Meadows to Green Creek, Yosemite Park, Sierra	July 7-14	220	35	c/o Jack Holmes
93	Twin Lakes (Bridgeport) to Virginia Lakes, Yosemite Park, Sierra	July 21-28	220	35	Doug Parr
94	Virginia Lakes to Tuolumne Meadows, Yosemite Park, Sierra	July 28-Aug. 4	220	35	Don White
95-E	Tuolumne Meadows to Agnew Meadows, Minarets Wilderness, Sierra	Aug. 4-11	230	35	Jack Holmes
96	Red's Meadow to McGee Creek, John Muir Wilderness, Sierra	Aug. 11-18	220	35	Jack Costello
97-E	Pine Creek to North Lake, John Muir Wilderness, Sierra	Aug. 18-25	230	35	Linda Furtado
98	North Lake to Pine Creek, John Muir Wilderness, Sierra	Aug. 25-Sept. 1	220	35	Ted Bradfield

## FAMILY TRIPS (See Base Camps for other trips with family rates.)

			Parents and one child	Each addl. child	
Wilderness Threshold					
100	•Mt. Desert Island, Acadia Park, Maine	June 24-30	275	90	35 Tricia and David Harrison
102	•Talchako Lodge and Tweedsmuir Provincial Park, British Columbia	July 25-Aug. 2	655	160	35 Ann and Tom Carlyle
103	•Chamberlain Lakes, White Cloud Mountains, Idaho	Aug. 6-13	525	130	35 Linda and Ed Best
104	•Imogene Lake, Sawtooth Wilderness, Idaho	Aug. 1-10	595	145	35 Molly and Harry Reeves
105	•Rainbow Lake, Minarets Wilderness, Sierra	Aug. 4-11	455	105	35 Judy and Jonah Freedman
109	•Mt. Desert Island, Acadia Park, Maine	Sept. 23-29	275	90	35 Tricia and David Harrison

## HAWAII (See Bicycle and Knapsack for other Hawaii trips.)

118	The Big Island, Leisure Base Camp, Hawaii	Sept. 19-Oct. 3	390**	35	Ed Connor
119	Christmas and New Year's on Hawaii	Dec. 23-Jan. 1, 1980	350**	35	c/o Ray Simpson

\*\*Trip prices do not include airfare.

## HIGHLIGHT TRIPS (See Alaska for an additional Highlight trip.)

125	Snake River Canyon, Wallowa Mountains, Oregon	June 16-24	360	35	Carroll Davis
126	•Cape Cod Jog, Massachusetts	June 30-July 7	165	35	Wes Miller
127	Jasper/Mt. Robson Parks, Alberta, Canada	July 15-24	400	35	Al Combs
129	Mt. Robson/Holmes River, British Columbia, Canada	July 26-Aug. 4	400	35	Al Combs
131	Kings Canyon North, Sierra Forest/Kings Canyon Park, Sierra	Aug. 1-12	395	35	Wayne Woodruff
132	Western Slope of the Tetons (North), Targhee Forest, Wyoming	Aug. 1-10	420	35	Lila Kramer
133	High Lake Country of the Beartooth, Custer Forest, Montana	Aug. 13-23	420	35	Charles Schultz
135	Seven Gables, Sierra	Aug. 20-26	300	35	Blaine LeCheminant
136	Milestone Bench, Kings Canyon/Sequoia Parks, Sierra	Sept. 2-15	415	35	John Edginton
137	Anza-Borrego State Park, California	Dec. 26-Jan. 1, 1980	215	35	Blaine LeCheminant

## KNAPSACK TRIPS (See Alaska, Canoe and Service for other knapsack trips.)

158	•Cruces Basin Leisure, Carson Forest, New Mexico	June 13-19	175	35	John Colburn
161	•Cranberry Backcountry Leisure, Monongahela Forest, West Virginia	June 24-30	135	35	Frederic Gooding, Jr.
162	•Grizzly Meadows, Trinity Forest, Northern California	July 7-15	115	35	Ellen Howard
163-E	•Siskiyou Wilderness Study, Klamath Forest, Northwest California	July 7-16	150	35	John Hart
164	•Benson Lake, Yosemite, Sierra	July 8-17	125	35	Bob Berges
166	•Glacier Lakes, Kings Canyon Park, Sierra	July 14-22	120	35	Leslie and Gary Young
168	•Yosemite High Country and the Minarets, Sierra	July 21-Aug. 1	150	35	Cal French
169	•Red Mountain Basin, Sierra Forest, Kings Canyon Park, Sierra	July 22-28	100	35	Serge Puchert
171	•Red Castle, Uinta Mountains, Utah	July 22-31	175	35	Bob Berges
173	•McGee Canyon, Kings Canyon Park, Sierra	July 28-Aug. 5	115	35	Raleigh Ellisen
174	•Convict Lake, Inyo Forest, Sierra	July 28-Aug. 5	115	35	Bob Maynard
176	•Triple Divide Pass, Sequoia/Kings Canyon, Sierra	July 29-Aug. 6	115	35	Phil Gowing
177	•Granite Park, Sierra-Inyo Forest, Sierra	Aug. 5-12	105	35	Eric Bergh
178-E	•Environmental Knapsack Workshop, Pike-San Isabel Forest, Colorado	Aug. 5-15	180	35	John Stansfield
179-E	•Mineral King/Golden Trout Wilderness, Sierra	Aug. 5-15	160	35	Ralph Huntoon
180-E	•Mineral King/Golden Trout Wilderness, Sierra	Aug. 5-15	160	35	Louise and Cal French
184	•Black Hills Leisure, South Dakota	Aug. 12-18	150	35	Faye Sitzman
186	•Thunder Mountain, Idaho Primitive Area	Aug. 12-25	165	35	Arthur Beal
188	•Fleming Creek, North Fork Kings River, Sierra	Aug. 16-24	120	35	Ray Collins
189	•Roaring River Canyons, Kings Canyon Park, Sierra	Aug. 16-25	125	35	Toni and Tom Landis
193	•Sierra Crest, Inyo forest/Sequoia Park, Sierra	Aug. 25-Sept. 2	115	35	Bud Bollock
194-E	•Absaroka/Beartooth Wilderness Photography, Montana	Aug. 26-Sept. 2	200	35	Pete Nelson
195	•Kern Hot Springs, Sequoia Park, Sierra	Aug. 31-Sept. 8	115	35	Don Lackowski
196	•Merced Triangle, Lyell fork Merced River, Yosemite Park, Sierra	Sept. 8-16	115	35	Jim Watters
197	•Adirondack Fall Color Leisure, New York	Sept. 30-Oct. 6	140	35	Connie Thomas
198	•Fall on the Appalachian Trail, Nantahala Forest, North Carolina	Oct. 6-13	140	35	Dave Bennie
199	•Lower Escalante River, Southern Utah	Oct. 8-17	170	35	Nancy Wahl
201	•Kauai Thanksgiving Knapsack Combination	Nov. 16-25	375**	35	Kent Erskine
202	•Grand Canyon, Arizona	Dec. 15-22	160	35	Tom Pillsbury

\*\*Trip price does not include airfare.

Trip Number	E = Educational outing • = Leader approval required	Date	Trip (Incl. Deposit)	Deposit	Leader
<b>JUNIOR KNAPSACK TRIPS</b>					
204	•Royce Peak Beginning Juniors, Sierra	July 4-11	115	35	Lynne McClellan-Loots
205	•Trans-Sierra, Sierra/Inyo Forests, Kings Canyon Park, Sierra	July 7-15	120	35	Patrick Colgan
206	•Whitney West, Sequoia Park, Sierra	July 13-22	145	35	Vicky and Bill Hoover
207	•Blackcap Basin, Sierra Forest/Kings Canyon Park, Sierra	July 16-24	120	35	Ann Peterson
209	•Lake Catherine, Minarets Wilderness, Sierra	Aug. 5-12	115	35	Ellen and Jim Absher
211	•Mount Ritter-Thousand Island Lake, Yosemite Park/Inyo Forest, Sierra	Aug. 29-Sept. 4	100	35	Jon Harris
<b>SADDLELIGHT</b>					
215	•Mono Creek Canyon, Sierra Forest, Sierra	July 22-27	390	35	Hasse Bunnelle
<b>SERVICE TRIPS</b>					
<b>Trail Maintenance Projects</b>					
231	•Teton Wilderness, Bridger-Teton Forest, Wyoming	July 5-15	60	35	Bill Bankston
232	•Cranberry Backcountry, Monongahela Forest, West Virginia	July 7-14	60	35	Dave Porterfield
233	•Clear Creek, Klamath Forest, Northern California	July 13-23	60	35	Bruce Horn
234	•Renshaw Lake, Lewis and Clark Forest, Rocky Mountains, Montana	July 23-Aug. 2	60	35	Bill Bankston
235	•John Muir Wilderness, Inyo Forest, Sierra	July 24-Aug. 3	60	35	Bruce Horn
236	•Long Mountain Lake, Selkirk Crest, Idaho	July 26-Aug. 5	60	35	Tim Cronister
237	•Wind River Range, Bridger Wilderness, Wyoming	July 26-Aug. 5	60	35	Dave Bachman
238	•Pine Lake, Marble Mountain Wilderness, Northern California	July 30-Aug. 9	60	35	Roy Bergstrom
239	•High Uintas, Wasatch Forest, Utah	Aug. 10-20	60	35	Jeff Trager
240	•French Canyon, John Muir Wilderness, Sierra Forest, Sierra	Aug. 21-31	60	35	Keith Proctor
241	•Joyce Kilmer-Slickrock Wilderness, North Carolina	Sept. 22-29	60	35	Ed Reid
<b>Clean-Up Projects</b>					
242	•Mt. Massive, Pike-San Isabel Forest, Colorado	July 6-16	60	35	John Stansfield
243	•Yosemite Park Airplane Clean-Up, Sierra	Aug. 4-14	60	35	Brook Milligan
244	•Pavillion Dome Airplane Clean-Up, John Muir Wilderness, Sierra	Aug. 6-16	60	35	Keith Proctor
245	•Bear Creek, Eagle Cap Wilderness, Oregon	Aug. 14-24	60	35	Don Coppock
246	•Casa Vieja Meadows, Golden Trout Wilderness, Sierra	Aug. 27-Sept. 6	60	35	Kelly Runyon
<b>Special Projects</b>					
247	•Medicine Mountain, Marble Mountain Wilderness, California	July 10-20	60	35	Roy Bergstrom
248	•Granite Basin Meadow Restoration, Sequoia/Kings Canyon Park, Sierra	July 16-27	60	35	Bob Korns
249	•Twin Lakes/Kaiser Peak Restoration, Kaiser Wilderness, Sierra	July 24-Aug. 3	60	35	Dave Simon
250	•Lyman Lake Revegetation, Glacier Park Wilderness, Washington	Aug. 8-20	65	35	Dave Bachman
251	•New Denver Glacier, Valhalla Range, British Columbia	Sept. 4-14	60	35	Alan Schmierer
<b>SKI TOURING</b>					
277	•Maine Wilderness Ski Tour Base Camp	Jan. 13-19, 1980	245	35	Frank Roberts
278	Superior-Quetico Ski and Snowshoe, Minnesota/Ontario	Feb. 24-March, 1, 1980	240	35	Stu Duncanson
280	Ski Touring Clinic, Steamboat Springs, Colorado	January 6-11, 1980	110	35	Sven Wiik
281	•Adirondack Ski Touring, New York	January 20-26, 1980	235	35	Walter Blank
<b>WATER TRIPS (See Alaska and Foreign for other Water Trips.)</b>					
<b>Raft Trips</b>					
287	Hell's Canyon of the Snake River, Idaho	June 29-July 4	490	35	Martin Friedman
291	River of No Return, Main Salmon River, Idaho	July 17-22	485	35	Dawn Cope
292	Hell's Canyon of the Snake River, Idaho	July 19-24	490	35	Victor Monke
293	Rogue River, Oregon	July 23-27	270	35	Gary Larsen
295	Middle Fork of the Salmon River, Idaho	Aug. 12-17	520	70*	Grace Hansen
296	Middle Fork of the Salmon River, Idaho	Aug. 20-25	520	70*	Chuck Fisk
297	Rogue River, Oregon	Aug. 27-31	270	35	Mary O'Connor
298	Grand Canyon Oar Trip, Arizona	Sept. 7-18	725	70*	Steve Anderson
299	Grand Canyon Oar Trip, Arizona	Sept. 24-Oct. 5	725	70*	Anna Stedina
*Per person deposit					
<b>Sportyaks</b>					
286-E	San Juan River, Utah	June 25-30	435	35	Kurt Menning
290-E	Green River, Utah	July 14-21	575	70*	Ginger Harmon/Harry Neal
*Per person deposit					
<b>Canoe Trips</b>					
306	•Eleven Point River Leisure, Missouri	June 17-23	165	35	Gary Baldwin
307	•Scenic Rivers, Wisconsin/Minnesota	June 24-30	180	35	Stu Duncanson
308	•Main Eel River Singles, Northern California	June 24-30	190	35	Patrick Dell'Era
311	•Trinity River, California	July 15-21	185	35	Carol and Howard Dienger

Trip Number	E = Educational outing • = Leader approval required	Date	Trip (Incl. Deposit)	Deposit	Leader
312	•The Upper Missouri of Lewis and Clark, Montana	July 27-Aug. 3	140	35	Charles Schultz
313	•Beginner Whitewater Instruction Clinic, North Carolina	July 29-Aug. 3	275	35	Vivian and Otto Spielbichler
314	•Rogue River Scenic/Recreational, Southwest Oregon	July 29-Aug. 4	200	35	Chuck Fisk
315	•Upper Mississippi River, Wisconsin/Minnesota/Iowa	Aug. 5-12	155	35	Jim Kirk
316	•Junker Lake Chain, Tweedsmuir Park, British Columbia	Aug. 7-15	335	35	Ann Dwyer
317	•Kipawa Reserve, Quebec, Canada	Aug. 12-22	235	35	Jean Brumbaugh
318-E	•Rogue River Naturalist, Oregon	Aug. 19-25	215	35	Judy Hacker
319	•Kejimikujik Wilderness Knapsack/Canoe, Nova Scotia, Canada	Aug. 19-29	205	35	Ted Reifenstein
320	•Killarney Park, Ontario, Canada	Aug. 26-Sept. 1	195	35	Richard Weiss
321	•Lower Canyons of the Rio Grande, Texas	Oct. 7-13	130	35	Steve Hanson
309	Kayaking the Rivers of Colorado	June 24-30	135	35	Reg Lake

#### Boat Trips

426	Sea of Cortez Leisure Boat Trip, Mexico *Per person deposit	Nov. 7-24	875	70*	Mary O'Connor
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#### 1979 FOREIGN TRIPS (Trip prices are subject to change and do not include airfare.)

955	•Indonesia: Land Below the Wind	June-July (28 days)	2335	100*	Ray Simpson
950	Kashmir Mountain Trek, India	July 5-29	1135	100*	Robin Brooks
945	•Yugoslavia: Mountains and Sea Coast	July 9-31	955	100*	H. Stewart Kimball
970	•Northern Kenya Hiking Adventure: Foot Safari Camping, Gameviewing	July 12-Aug. 7	2025	100*	Hunter Owens
965	Colombia	July 25-Aug. 16	1910	100*	Rosemary Stevens
975	•Hiking in Norway	Aug. 2-24	1235	100*	Dolph Amster
977	Sri Lanka (Ceylon)	Aug. 3-22	885	100*	Al Schmitz
980	African Wildlife Safari: Kenya and Botswana	Aug. 5-Sept 1	2390	100*	Betty Osborn
995	La Belle France—From Caveman to Ecologist	Sept. 15-30	1150	100*	Ivan de Tarnowsky/ Elaine Adamson
510	•Sherpa Country, Nepal	Oct. 13-Nov. 27	2175	100*	John Edginton
515	Mexico	Nov. 10-Dec. 7	1070	100*	Bob Kroger
520	•Omo River Expedition, Ethiopia	Nov. 26-Dec. 23	2185	100*	Al Schmitz
525	South India Wildlife Tour	Dec. 29-Jan. 22, 1980	1060	100*	Kathy and Robin Brooks

#### 1980 FOREIGN TRIPS

All 1980 Foreign Trips still have openings. These trips will be listed here in July/August, but if you wish to find out about them earlier, contact the Outings Department.

## Ski Touring

(280) **Ski Touring Clinic, Steamboat Springs, Colorado—January 6-11, 1980.** Leader, Sven Wiik, Box #5040, Steamboat Village, CO 80499.

Here is an opportunity for five days of excellent skiing with all levels of touring instruction. Your instructors will all be certified, the trip leader a former Olympic Nordic coach. Included in the program are selection and care of equipment, ski-touring technique, half- and full-day tours. Arrangements must be made directly with the Scandinavian Lodge for room and board.

(281) **Adirondack Ski Touring, New York—January 20-26, 1980.** Leader, Walter Blank, Omi Rd., West Ghent, NY 12075.

Trips will be run daily for all levels of skiers in a series of cross-country tours in the Adirondack Forest Preserve. There will be opportunity to upgrade the level of your skiing and/or visit remote areas of the Adirondack Park in mid-winter. The first four nights will be spent in a lodge on a wilderness lake, with main meals at the lodge and lunches on the trail. The last two nights trip members will ski into two remote cabins heated by wood stoves. Packs and sleeping bags are required for the last two nights. Skis may be rented. Leader approval required.

### For More Details On Outings

Outings are described more fully in trip supplements which are available from the Outing Department. For more detailed information on a trip, request the specific supplement for that outing. Trips vary in size and cost, and in the physical stamina and experience required. New members may have difficulty judging which trip is best suited to their own abilities or interests. Don't be lured onto the wrong one! Ask for the trip supplement before you make your reservations, saving yourself the cost and inconvenience of changing or cancelling a reservation. The first five supplements are free. Please enclose 50 cents apiece for extras. Write or phone the trip leader if any further questions remain.

Clip coupon and mail to:

SIERRA CLUB OUTING DEPARTMENT

530 Bush Street

San Francisco, CA 94108

Sierra Club Member  Yes  No

Send Supplements: # \_\_\_ # \_\_\_ # \_\_\_ # \_\_\_ # \_\_\_  
(by trip number)

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Enclosed is \$ \_\_\_\_\_ for supplements requested over 5 at 50 cents each.

*The Ongoing Melodrama of the Alaska National Interest Lands Legislation: Will Congress Ever Pass an Adequate Bill?*

# Alaska in the House: The Last Act?

EDGAR WAYBURN

**A**S THE Alaska National Interest Lands Act moves through Congress again, it is assuming the qualities of a classic soap opera. It moves from crisis to crisis as the cast of characters changes. The power base shifts, and the suspense deepens. An anxious public awaits the outcome: What will the ending be? Consider the episodes to date:

In early 1978 the House Committee on Interior and Insular Affairs of the 95th Congress reported out—by a one-vote margin—a bill to protect Alaska National Interest Lands. Later, a good consensus bill was agreed to by the Interior and Merchant Marine & Fisheries committees and was approved overwhelmingly by the full House of Representatives.

The bill then moved on to the Senate—where it sank into the doldrums of the Senate Energy and Natural Resources Committee. In the final days of the 95th Congress, at the last possible moment, the committee reported out a bill, albeit an inadequate one. But it was too late. Efforts to keep alive that—or any—Alaska National Interest Lands bill were killed by the successful filibuster tactics of one man, Senator Mike Gravel (D-Alaska).

According to the original time schedule of the Alaska Native Claims Settlement Act, the national interest lands would revert to the status of unreserved public lands (open to any exploitation)



Mark McDermott

*The east side of Mount McKinley, seen from the Ruth Amphitheater area. President Carter expanded the size of Mount McKinley National Park by adding a large National Monument to its borders.*

on December 18, 1978. Only Presidential action could save them.

President Carter to the rescue! In the very nick of time he established 56 million acres in Alaska as National Monuments. Concurrently, Interior Secretary Cecil Andrus withdrew another 40 million acres for National Wildlife Refuges, and Agriculture Secretary Bob Bergland withdrew 11 million acres of wilderness

in Alaska's National Forests. Another crisis had passed; Alaska's land was protected. But these designations did not solve a host of other related problems, including the question of where sport hunting should be allowed, what subsistence measures would be permitted, and which lands could be conveyed to state ownership. In 1979, the 96th Congress went to work.

February brought another cliff-hanger; the House Interior Committee—again by a single vote—reported out a bill. But this bill, the "Huckaby Substitute," named for its author, Jerry Huckaby (D-Louisiana), was far from adequate. Then, in March, the House Merchant Marine & Fisheries Committee reported out its own inadequate bill, the "Breux-Dingell Substitute" named for John Breux (D-Louisiana) and John Dingell (D-Michigan).

As of this writing, the action has moved to the House floor. The plot thickens as leaders of both parties, Morris Udall (D-Arizona) and John Anderson (R-Illinois), join forces to present yet a third bill. The Udall-Anderson bill is similar to the one passed last year by the House, and environmentalists are supporting it. The two substitute bills, masquerading as "balanced environmental legislation," would in reality do a great deal of harm. Although the Huckaby and the Breux-Dingell measures designate a total acreage of national interest lands comparable



to the Udall-Anderson bill, the degree of so-called "protection" is ludicrous. These bills:

- slash wilderness to a minimum.
- allow hard-rock mining within national wildlife refuges.
- permit sport hunting to the extent that wildlife populations would be seriously threatened.
- dilute national park protection by re-designating proposed parks as national preserves, national recreation areas or wildlife refuges.
- eliminate certain wildlife refuges by placing them under the jurisdiction of a joint federal-state classification system.
- open up the Arctic National Wildlife Range (calving grounds of the Porcupine caribou herd) to unlimited oil and gas exploration.
- cut the acreage and protection of Misty Fjords and Admiralty Island national monuments.
- reduce the width of wild and scenic river corridors from four miles to one-half mile.
- delete a number of rivers from proposed wild and scenic river status.
- permit invasion of conservation systems by unprecedented granting of rights-of-way.
- gut a program of subsistence provisions that had been carefully worked out with Alaskan native peoples.

By the time this magazine reaches readers, the House will probably have passed one of the three Alaska bills currently before it. The action will then move to the Senate and ultimately to a conference committee between the two houses of Congress. What will the final outcome be? Will we cry tears of joy or sorrow? Only the next episodes will tell.

Unfortunately, this is more than a soap opera. We are not dealing with fictitious plots or imaginary characters. The Alaska issue is not only real, but the most important conservation opportunity of our lifetimes.

We cannot be simply viewers of the soap opera, either. We must be active participants in this drama—or lose the whole show. □

*Edgar Wayburn chairs the Club's Alaska Task Force and is a past President of the Sierra Club.*

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# The Whooping Crane: A Success Story

BRUCE HAMILTON

Goose music and the whistle of wings overhead herald the return of spring to the Great Plains. The river ice cracks open, thaws, and huge blocks break loose and scour the sandbars and banks. The prairie potholes are brimful with snow melt, and soon the sky is alive with returning waterfowl following their ancestral flight path northward.

On a chilly April morning, if you huddle in the willows along a river like the Platte in Nebraska, you can see thousands of birds on the water, in the surrounding fields and overhead—Canada geese, great blue herons, snow geese, blue-winged teal, widgeons and dozens of other species. There is one unusual part of this awesome wildlife spectacle every birdwatcher hopes to see. As you scan a cornfield full of sandhill cranes or guide your canoe around a bend in the river and scare up a cloud of mallards, you hope that among the crowd will be a majestic white bird with black wing tips. But your chances of such a sighting are slim—only about 70 whooping cranes are left in this flyway.

The number 70 is one biologists are proud of, nevertheless. Once there were as few as eighteen wild whoopers. Their slow but steady recovery from near-extinction has been reason for international celebration, for more than any other species, the whooping crane symbolizes the attempt to protect endangered species.

The whooping crane never was an abundant bird. Experts estimate the population peaked at only 1300 to 1500 individuals, even when the breeding range of the cranes extended from northern Illinois through Minnesota, North Dakota and the prairie provinces of Canada. The birds wintered along the Gulf of Mexico from Louisiana to north-eastern Mexico, and a nonmigratory flock lived in the grasslands of south-western Louisiana.

The birds' major decline occurred in the last quarter of the nineteenth century. A combination of heavy hunting and the destruction of prairie wetlands probably caused the population crash of the plains



*A pair of whooping cranes surrounded by lesser Canada geese*

Photographs by David Blankinship

birds. Hunting, habitat loss and a severe hurricane in 1940 apparently killed most of the Louisiana whoopers. Soon there remained only a single flock that nested in Wood Buffalo National Park in northern Canada and wintered on the Texas coast, and even this last flock was severely threatened.

In the 1930s it was clear the whooping crane was in peril, but not enough was known about the bird and its habits to figure out how to protect it. In 1936 biologists discovered a group of wintering whoopers on the Texas coast; the next year the Aransas National Wildlife Refuge was established to protect most of the crane's only known wintering ground. Still no one knew where the birds nested or even the sex of the existing birds.

Establishing the refuge for the wintering birds was not enough. When the U.S. Army Corps of Engineers dredged the Gulf Intracoastal Waterway through the refuge in 1940, acres of crane habitat on the salt flats were destroyed. Commercial shipping in the waterway created another hazard: in 1974 a barge leaked heavy crude oil into Aransas—creating an oil slick ten miles long. Fortunately, most of the whoopers weren't in the refuge during the spill, and it was quickly cleaned up. Another cause of concern has been oil drilling near the refuge and in surrounding crane habitat; well discharge, construction of roads and pipelines, and the potential of oil spills have been constant worries.

The whoopers have even faced being bombed by the U.S. Air Force. In 1942 the Air Force began using Matagorda Island near the refuge as a practice bombing range, and in the summer of 1955 Matagorda was proposed as a practice site for photo-flash bombing—a bomb used at night to illuminate large target areas. A protest from the Canadian Embassy finally brought a halt to that project, but in 1962, during the Cuban missile crisis, the Air Force began dropping live bombs on Matagorda again. When the bombing started, ten whoopers were using the island.

The nesting grounds in Wood Buffalo

National Park faced other threats. The park's remoteness had protected the whoopers—in fact, the actual nesting area wasn't discovered until firefighters stumbled upon it in 1954. The following summer, Robert Porter Allen, an Audubon Society researcher and the leading authority on whooping cranes at the time, located the nesting sites and happily reported that the area was nearly inaccessible to people, that food and water were adequate, and predators were scarce.

But in 1959 the Canadian National Railway announced plans to build a branch line in the area. The shortest and cheapest route would have passed through the park within eight or ten miles of the nesting ground. Conservationists feared the railroad would change the course and flow of rivers, bring in telegraph lines (which are hazards for the birds), and possibly cause fires that could sweep into the nesting ground. After considerable protest, a more expensive route around the park was built.

However, protecting the wintering and the nesting grounds of a migratory species is only part of a successful preservation program. In the spring of 1975 nine whoopers landed in a marsh in Nebraska. Whoopers had stopped there in years past, and wildlife officials expected that they might again. But when the birds arrived, they were quickly herded away with firecrackers and low-flying aircraft: The marsh was the scene of an outbreak of fowl cholera, a fatal disease that the officials feared could be transmitted from dead and dying waterfowl to the whoopers.

The tactic worked; the whoopers survived. But the incident illustrated the need to keep better track of the migrating birds and to make sure that their stopover spots were safe.

Since the near-catastrophe in Nebraska, a tracking program has been established; when the whoopers leave their nesting or wintering grounds to begin their 3000-mile migration, an alert goes out, and sightings are phoned in to the U.S. Fish and Wildlife Service office in



“Our ability to perceive quality in nature begins, as in art, with the pretty. It expands through successive stages of the beautiful to values as yet uncaptured by language. The quality of cranes lies, I think, in this higher gamut, as yet beyond the reach of words.”

—Aldo Leopold, in *Sand County Almanac*

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## Snatching Eggs

Since efforts to increase the number of whooping cranes began, there has been heated controversy over whether to breed whoopers in captivity and release them to the wild or to let the wild flock increase on its own.

A major research breakthrough was the discovery that although nine out of ten pairs of whooping cranes lay two eggs, only one in ten families arrives at Aransas with two chicks. This finding led researchers to believe that one egg could be removed from each clutch of two without reducing the annual wild production.

At first the snatched eggs were taken to the Patuxent captive breeding center in Maryland. The hatching and survival rates in captivity have been comparable to those of the wild flock. When a crane chick was hatched at the center in May of 1975 from parents also hatched at Patuxent, it was a milestone in the captive breeding program.

In 1975 a second phase of the egg-snatching experiment began, using foster parents to hatch and raise whoopers in the wild. Snatched "surplus" eggs are flown to the Grays Lake National Wildlife Refuge in Idaho where they are placed in sandhill crane nests. The sandhill parents hatch and raise the whoopers, and it is hoped that eventually the fostered juveniles will leave the sandhills and form a second permanent wild flock of whooping cranes. The establishment of a second flock with a separate migration route would lessen the chances that a major disaster hitting the main flock would wipe out the species in the wild.

To date the foster-parent program has been highly successful. However, it will be several years before researchers know if the fostered juveniles will mate, breed and establish a second stable, independent flock.

Pierre, South Dakota. Consequently, some of the birds' whereabouts can be plotted on a daily basis. Communities along the flyway are alerted to the coming of the cranes, and such potential hazards as disease outbreaks or oil spills are reported. Hunters along the route are also alerted. In some areas, hunting is suspended until the cranes have passed.

Though this effort sounds impressive and is certainly a positive step toward preservation of the species, most of the birds' whereabouts are unknown most of the time.

Whoopers migrate in small flocks, in family groups or as single birds. They may stop to rest for a single night or be grounded by severe storms for several days in one area. Stopover sites aren't used every year, and we undoubtedly have not located many of them. But each year there are a few more dots indicating confirmed sightings added to a master map of the Great Plains, and migration patterns are starting to become apparent.

In 1975, as part of the effort to increase the size of the wild crane population, the U.S. Fish and Wildlife Service formed a Whooping Crane Recovery Team. The team examined the ecological needs of the cranes and looked at areas where the birds had been repeatedly sighted. From this information they compiled an inventory of "areas of

concern"—that is, areas of known or probable value to the cranes. The team recommended protecting "stepping stones" of safe habitat along the flyway at 150- to 200-mile intervals.

"Along the migration route there must be many sites that would satisfy the roost requirements of whooping cranes," says David Blankinship, a research biologist with the National Audubon Society. "The problem is that we know of only a few. These are the only areas we can protect because they are the ones we can locate. Man's activities constantly reduce the number of suitable sites, both known and unknown, as one disappears to a drainage project, another is flooded by a new dam, and yet another is covered over by a new road project."

In 1975 the Fish and Wildlife Service proposed using the provisions of the Endangered Species Act to designate critical habitat for the whooping crane. It was the first time critical habitat had been proposed for a migratory species. The proposal included the team's "areas of concern" in Oklahoma, Kansas and southern Nebraska, as well as the Aransas refuge in Texas and three sites in the Rocky Mountain states where an attempt was being made to establish a second flock of wild whoopers. However, the agency did not propose any areas in the Northern Plains, so some of the critical

stepping stones were missing; a 600-mile gap stretched from the Platte River in Nebraska to the Canadian border.

The Sierra Club and the Audubon Society felt that this omission was politically motivated. The U.S. Bureau of Reclamation has proposed several major water projects near the areas of concern in the Northern Plains. Norden Dam in Nebraska would affect part of the Niobrara River site; the Pollock-Herreid Unit irrigation project would affect the Pocasse National Wildlife Refuge site in South Dakota; and parts of the Garrison Diversion irrigation project would affect the Audubon National Wildlife Refuge in North Dakota. In response, Allen Stokes and Tony Ruckel of the Sierra Club Legal Defense Fund filed a petition on behalf of the Sierra Club and the Audubon Society requesting the government to take immediate steps to designate critical habitat for the whooping crane in the Northern Plains. "Critical habitat review of the Southern Plains becomes absurd if at the same time similar areas on the Northern Plains are eliminated or become useless," said Stokes.

"The government seems to drag its feet whenever conflicting development interests are present," said Ruckel. "We believe the Endangered Species Act calls for the government to protect the whooping crane *before* dams and other water projects interfere. We intend to press this point until the threats to the whooping crane are met and dealt with."

After two years of pressure, the Fish and Wildlife Service finally agreed that the Sierra Club and the Audubon Society had provided enough data so that the Northern Plains areas could be proposed for designation. In May 1978 the service designated the Southern Plains and Rocky Mountain sites as critical habitat. In August the proposed critical-habitat designation for the Northern Plains areas was released, and to all appearances the long struggle was over.

Instead, a new phase of the struggle was beginning. The proposal was immediately denounced by development interests, who saw it as a plot by environmentalists to stop water projects. North Dakota's *Minot Daily News*, a champion of water projects in the state, reported that critical-habitat designation would result in "a complete lid on any construction in the habitat area that involved federal funding." Rumors spread that the designation would halt the plowing of fields, road resurfacing and other minor activities. Petitions were circulated that protested the designation.



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Fish and Wildlife Service officials attempted to cool debate by downplaying the consequences of critical-habitat designation. Andy Anderson of the service noted that the proposal wouldn't affect private actions on private lands with private funds. Federal agencies, such as the Bureau of Reclamation, would not encounter any new obstacles as a result of the designation—they are already required by law to evaluate the effects of their actions on endangered species, even if a critical habitat is not involved. "Critical-habitat designation just helps the agencies focus their attention on problem areas—it puts up a red flag," said Anderson.

But developers remained uneasy about the proposal—partly because existing critical habitat for the cranes on the Platte River in Nebraska was cited as a reason to hold up construction of the Grayrocks Dam upstream in Wyoming. Three other water projects on Platte tributaries in Colorado also appeared threatened; if the Platte's spring flows were significantly reduced by these projects, ice and flood waters would no longer scour the sandbars. The river channel would narrow as vegetation encroached from its banks, and soon the river would cease to be a favorable roosting site for cranes.

Grayrocks, the dam that would serve a huge coal-fired power plant, was the project nearest completion. The state of Nebraska, the National Audubon Society, the National Wildlife federations and the Powder River Basin Resource Council filed suit to halt the project, citing, among other things, violation of the Endangered Species Act.

News that a bunch of birds that used a stretch of river only a few days a year were holding up a multimillion-dollar project reached Congress just as it was also considering reauthorization of and amendments to the Endangered Species Act.

First came an attempt to exempt Grayrocks from the provisions of the act. The amendment passed the House but was dropped in conference committee in favor of a compromise approach. Finally, a cabinet-level endangered species committee was charged with reviewing seemingly irreconcilable conflicts and determining whether specific projects should be exempt from the act. The amending legislator also required the Secretary of the Interior to take into account economic as well as biological factors when making future critical-habitat designations. The committee was given two initial cases for expedited review—

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Grayrocks was one of them.

Shortly after Congress acted, the Grayrocks lawsuit was settled out of court; project sponsors agreed to limit their water use, to release a guaranteed minimum volume of water during critical low-flow periods, and to establish a \$7.5-million trust fund for maintenance and enhancement of the downstream whooping crane habitat.

In January 1979 the endangered species committee met to decide the fate of Grayrocks. The panel voted unanimously to exempt Grayrocks from the act on the condition that the measures agreed to in the out-of-court settlement be adopted.

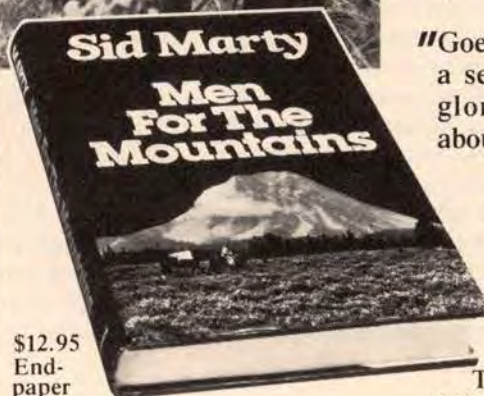
No one knows if the conditions will be sufficient to protect the cranes' habitat. Keith Harmon of the Wildlife Management Institute says most of the water the Grayrocks' sponsors have promised to release may never get to the cranes' roosting areas because it will be consumed by upstream Nebraska irrigators. Pat Parenteau, the National Wildlife Federation lawyer in the Grayrocks suit, hopes that even if the Grayrocks releases are insufficient, perhaps the trust fund can be used to purchase enough water and to control vegetation so that optimum roosting conditions for the birds can be maintained.

For now, the cranes are safe. No bombs fall on their wintering ground. No guns await their arrival on the prairie. Wildlife officials stand ready to herd them away from potential threats. Some of their key stopovers are protected. Researchers are working on captive breeding to establish a second wild flock. But new threats will appear until we realize that whooping cranes have a right to occupy a portion of the earth, too. □

### What You Can Do

Public hearings and the period for public written comment on the proposed critical habitat areas in the Northern Plains were cancelled last fall because funding for the endangered species program had temporarily run out. The hearings and comment period will be rescheduled soon. Watch the Sierra Club *National News Report* for information and dates. Your support for this proposal is very important.

*Bruce Hamilton is the Club's representative in the Northern Plains.*



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Zero Population Growth (ZPG) and the American Public Health Association, with only modest (though increasing) funding from public sources.

Single, short-term actions will not suffice. Population policy requires multiple, sustained efforts supported by strong commitment of governmental leaders. Influencing population is not a task that can be accomplished by passing a piece of legislation or signing an executive order. It's a complex and lengthy process. What the U.S. needs most now is to develop the government's ability to analyze, formulate, coordinate and monitor the major social and governmental policies and programs that determine birth and migration rates. Our weakness in collecting and using data was dramatically demonstrated during the post-World War II baby boom. The elementary schools were caught by surprise then and had to begin a crash building program to accommodate this flood of new students. Anyone who had looked at the birth figures during five previous years could have seen this boom coming. What is even more surprising, however, is that the high schools were *also* not ready when the same babies reached high-school age. And the same was true for colleges. No one learned to look at and use the knowledge that should have been obvious to all. Perhaps it is encouraging that now the government is beginning to look at the social security system uneasily, having apparently realized that

the boom babies will eventually reach retirement age.

Since population problems are fundamental, complex and very long-range, requiring multiple actions by many groups, what can be done? Here are a few things that environmentalists can do:

- Take initiatives that federal, state or local governments cannot or will not take because of inertia, lack of commitment, inadequate understanding or political timidity. These might include recommending an explicit population policy, seeking increased federal funding for family planning and advocating stricter immigration policies.
- Maintain monitoring, appraisal, and support by informed citizens of governmental population activities in the U.S. and elsewhere.
- Disseminate new knowledge and fresh points of view on the causes and effects of population change to members, legislators, civic leaders and the public.
- Maintain a global perspective, recognizing the interdependence of the U.S. and other nations and learning from the experience of those European countries that have reached or are approaching zero population growth.
- Stimulate support for research into the interactions of population change with ecological issues such as wilderness and natural resources. This knowledge will be very useful in the quest to protect wilderness and establish parks.

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ternational cooperation in development. Economic inequities between the U.S. and Mexico have encouraged Mexicans to move to the U.S.; this migration has created pressing problems for both nations. But the recent discovery of huge oil deposits in Mexico should improve that nation's economy rapidly and dramatically. What would happen if a coalition of private organizations, with governmental support for ten to twenty years, turned its joint energies to an intensive international people-to-people corps? The purpose of such an undertaking would be to improve and stabilize all the components of what is generally called the quality of life—food, water supply, housing, health, education, employment and human rights. Population growth is certainly one problem that must be addressed as part of such a venture, and population stabilization in North America could be the result. Such a process of economic equalization should reduce the problems of migration on both sides of the border and make an open border possible.

No branch of government has a qualified, professional staff whose primary purpose is to understand and inform government leaders and Congress on population issues facing the United States. Nor are there such population units in the private sector, although the Alan Guttmacher Institute has a similar facility that studies domestic fertility policy and the Center for Policy Study of the Population Council also monitors and reports on international population affairs.

There is a definite national need for a private consor-

tium of like-minded groups, a small, highly qualified professional staff to analyze not only the effects of possible changes in some component of governmental population policy on the population growth rate—such as new immigration laws and changing water-resource policies—but also the costs and benefits of accommodating to population change when planning for education, housing, employment, health, transportation and other services. Responding to policy makers' requests and making information available to legislators would, I think, help them to understand how useful such a unit within the government could be.

Population policy—like any policy—begins with goals and includes whatever reasonable courses of action may be needed to reach those goals. The U.S. should be ready for a comprehensive policy aimed at an early stabilization of population. But groups such as the Sierra Club will have to lead the way. In a sense, the traditional pursuits of the Club, such as the preservation of wilderness, are ultimately dependent on the success of a rational population policy. No single organization can do enough by itself, but a coalition of private groups with government support could be extremely effective in awakening hope that people themselves can do things to widen their choices for better lives now and in the future. □

*Leslie Corsa is a professor of population planning at the University of Michigan and chairs the Club's Population Committee.*

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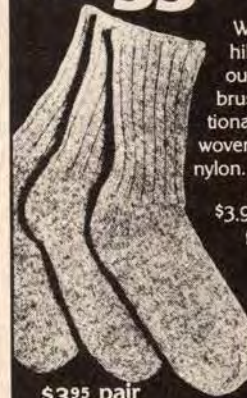
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# The Columbia Glacier

LORIN MANNELLA

Supertanker traffic from Valdez, Alaska, the terminus of the transAlaska pipeline, may encounter a serious new hazard—giant icebergs in the shipping lanes. After years of stability, the face of the Columbia Glacier, an ice river that flows into Columbia Bay only nine miles from Valdez, appears to be receding and may soon start “calving”—shedding huge icebergs that will become navigational hazards as they float into the path of the supertankers that deliver Alaska’s oil to California.

The Columbia Glacier is a 41-mile-long river of ice that wends its way through the rugged Chugach Mountains of southeastern Alaska to the frigid waters of Columbia Bay in Prince William Sound. Because it ends at the sea, it is called a tidewater glacier. One of the largest and most beautiful glaciers along the Alaska coast, it attracts thousands of tourists every year who ride the ferry of the Alaska Marine Highway System between Valdez and Whittier to approach within a half-mile of the glacier’s immense face. Private sightseeing boats venture even closer, gently pushing their way through the ice-clogged waters.

Unlike other glaciers in the area that have receded significantly, the Columbia Glacier has remained stable since it was first mapped by the Vancouver expedi-

tion’s cartographer, Whidbey, in 1794.

The cliff face or terminus of the glacier at Columbia Bay varies in height from 164 to 262 feet above sea level. The face, two and a half miles long, juts far into Prince William Sound to form the end of the bay; the glacier also extends another two and a half miles east from Heather Island, across another smaller bay and then up onto the land. The huge mass of ice covers a total surface area of 440 square miles. So impressed by its size were two National Geographic Society scientists in 1914 that their study of the glacier includes a map of the ice with a map of the city of Washington, D.C., superimposed.

As one approaches Columbia Bay by boat, small icebergs begin to appear. Seen from miles away, the wall of ice looks out of place, as though it had been carelessly dropped between the rugged, bristling forests that flank it on both sides. As the boat approaches the ice cliff, the icebergs become more numerous, and although the temperature on land may be in the 60s or 70s, the air directly in front of the glacier is so cold that bare hands clutching cameras are quickly numbed. Looking up at the craggy wall of ice, the viewer forgets the green-forested islands, mountains and shoreline of Prince William Sound and soon the dominant impression is of ice—nothing but ice in every direction.

Although the waters of Columbia Bay are frigid and clogged with ice for almost a mile from the cliff face—even during the summer—the area teems with life. Plankton and microscopic water plants thrive in the icy water and attract a large variety of sea animals in great numbers.

Feeding fish attract kittiwakes, bald eagles and harbor seals to Prince William Sound, and killer and Minke whales and harbor and Dall porpoises are not uncommon. Even the larger humpback whale, an endangered species, is occasionally seen, as are the grey whale and members of the beaked whale family. Harbor seals often congregate on the ice floes in front of the glacier to feed on the bay’s plentiful fish and crustaceans.

The glacier itself originates in basins high in the Chugach Mountains, where it is fed by year-round snowfall. The icefields fill with snow, and gravity forces them downward, out of the basins; separate streams converge in the main body of the glacier, which carves a valley through the land to the sea. The lower twelve miles of this sloping ice river are visible from Columbia Bay.

Seen close, the glacier is striking. Its intense blue color is caused by refraction of light from the highly compacted ice crystals. The intensity of the color varies with the amount of sunlight; the color is more vivid on cloudy days. The face of the cliff has a horizontally striped, layered appearance. Each winter a layer of compacted, granular snow, called a firn, is added to the glacier. Each summer a film of dust, rock, pollen spores, insects and bits of vegetation is deposited on top of the newest firn. These alternating layers record the climatic changes and, under a microscope, reveal part of the biological history of the area.

The sides of the glacier, where it meets the forest, are littered with broken, twisted and upturned trees. Tons of gravel imbedded in the ice blacken the glacier and offer evidence of the earth-gouging, centuries-long trip it has taken from the mountains to the sea.

Until recently, scientists have noted the stability of the glacier in relation to its immense size. Photographs taken by the Harriman Alaskan Expedition in 1899 reveal that the glacier has occupied about the same position since then. But a fourteen-member U.S. Geological Survey team studying the glacier under a



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two-year, \$1.3-million project has reported that as early as this summer the face may start retreating and tossing thousands of various-sized icebergs into the paths of the 200,000-ton supertankers that ship oil south from Valdez.

Austin Post, a hydrologist with the research group, reported that in 1971 the glacier had developed a large opening, or embayment, on its west side that it has since been unable to repair. The glacier had previously been stable because its face rested on a shoal only a few feet below the water's surface. But a tidewater glacier becomes unstable when it retreats even a short distance from a terminal shoal into a deep basin, where the glacier loses its support and begins to erode. This could easily happen to the Columbia.

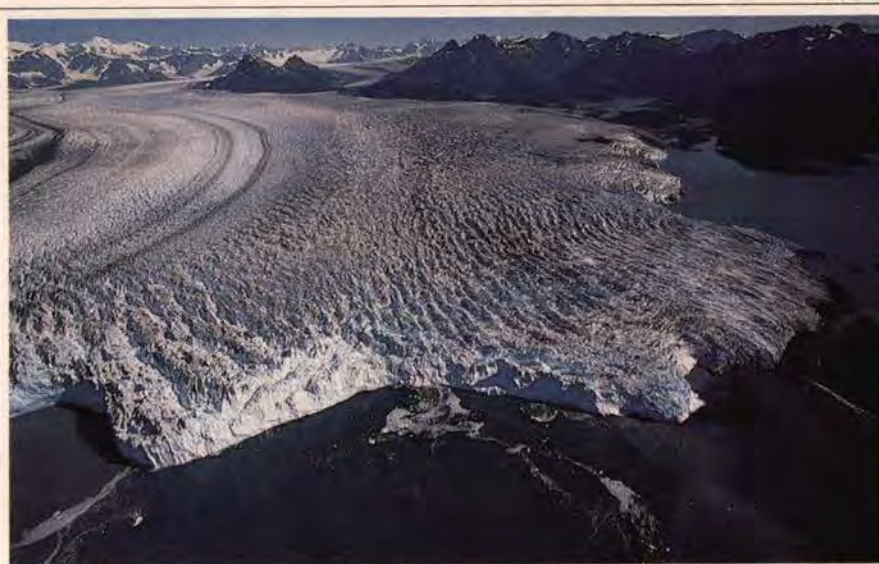
Post now says, "There's about a 50-50 chance it will begin shrinking this summer or in the next few years. This instability has been building for decades." He also says that if the face of the glacier does begin to shrink, it could rapidly increase iceberg calving by as much as 50% of its normal production.

Another group of federal scientists has proposed a number of strategies for keeping icebergs away from the supertankers. One suggestion is to stretch a ten-inch-thick rope across Columbia Bay to corral floating icebergs and hold them until they melt. The rope would have to be two and a half miles long and would cost about \$32 million.

Another proposal is to lasso the

## More Earthquakes?

A large earthquake struck the Alaska coast on February 28, and more may be on the way, according to a report in *Science* (March 16, 1979). The quake was centered 400 kilometers east of Anchorage—very near Valdez and the Columbia Glacier—in a normally active seismic zone that has not experienced a large earthquake in 30 years or more. William McCann, of Lamont-Doherty Geological Observatory, believes that the earthquake relieved some of the seismic stress in the area—but not all of it. Thus, McCann is convinced there is a strong possibility of other quakes near Valdez and the Columbia Glacier in the near future. The effect of earthquakes on the glacier's stability may be a matter of considerable consequence.



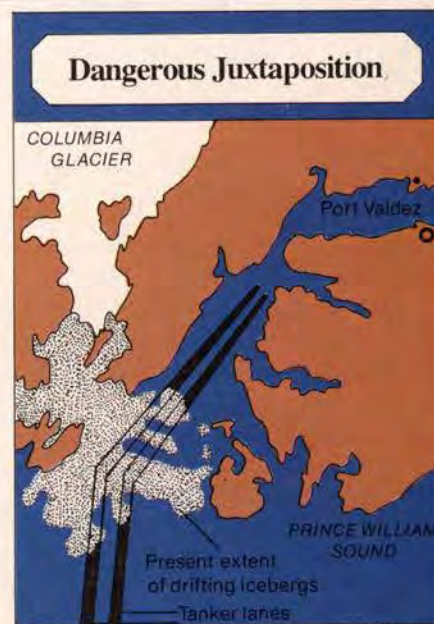
An aerial view of the Columbia Glacier. The semicircular embayment in its face may start increased "calving" of icebergs this summer.

icebergs and, using a flotilla of tugboats, haul them out of the way. A third proposal is to keep the supertankers away from the icebergs—by shutting down the oil tanker traffic until the icebergs float away. In August 1977 the U.S. Coast Guard, which has jurisdiction over the Alaskan oil-shipping lanes, did close down the Valdez Arm shipping lanes to night traffic because of icebergs.

The final suggestion is to locate the icebergs by radar. This would involve constructing a radar station near the Valdez Arm shipping lanes. Avoiding the icebergs once they're located is another problem.

It should be recalled that some of the environmental objections to building the transAlaska pipeline with a terminal in Valdez were: the lack of maneuverability of the supertankers, especially in the narrower sections of Valdez Arm; the frequency of storms, high waves, winds and fog along the supertanker routes; and the likelihood of earthquakes in the Prince William Sound area. When the threat of massive icebergs floating about is added to the present dangers, the possibility of collisions and oil spills with potentially devastating results for marine life is greatly magnified. Austin Post believes that unless the glacier can repair the embayment in its west side and maintain its present position, it will begin a retreat of "many kilometers per year as innumerable icebergs, some of immense size, break away from the glacier." How large would these icebergs be?

A cube-shaped iceberg with sides one quarter-mile long would weigh more than a billion tons—5000 times heavier than a supertanker. The feasibility of roping off and containing an iceberg pro-



pelled by wind and waves must, therefore, remain seriously in doubt.

Should Post's scenario actually occur, extreme as it may seem, a ban on tanker traffic might be the only practical solution until the icebergs and the threat of collision disappeared. Since this would undoubtedly take years, the suggestion would undoubtedly be vehemently opposed by oil companies and the politicians who represent them.

One final note of irony: For years, passengers aboard the ferryboat *M.V. Bartlett*, when making a regular sightseeing stop at the face of Columbia Glacier, have been allowed to take turns sounding the ship's horn, which is loud enough to dislodge chunks of ice the size of houses that fall into the sea with a roar. □

Lorin Mannella is a free-lance writer in Medford, Massachusetts.

"Eternal Vigilance Is the Price of Liberty"—Thomas Jefferson

# The Citizen As Victim

## When Farmers Turn Detective

CARL POPE

*Bitter Harvest*, by Frederic and Sandra Halbert; Wm. B. Eerdmans Publishing Company, 255 Jefferson Ave., S.E., Grand Rapids, MI 49503; 1978. Paper, \$4.95.

ANY CONSERVATIVE who fancies that the American chemical industry is over-regulated should read this book. So should any liberal who professes bafflement at the public reaction against government. Both should be disturbed, for the image left with the reader of *Bitter Harvest* is of a society built on a technological base utterly unforgiving of human error, human shortsightedness, human weakness.

Frederic Halbert is a dairy farmer. In the course of attempting to find out what illness was destroying the health and productivity of his Michigan dairy herd, he uncovered the contamination of dairy feed by the poisonous fire-retardant, poly-brominated biphenyl (PBB). *Bitter Harvest*, written by Halbert and his wife, Sandra, who shared the ordeal with him, is the story of his search. In a sense, it is also a book on the ways our chemical technology poisons our environment, our food and our selves. In this case, PBB is now present in virtually every person in the state of Michigan, and thousands of cows, fowl and other livestock have had to be destroyed as a result.

But *Bitter Harvest* is unique. The Halberts have succeeded in giving a voice to the victims of PBB with a directness that is more reminiscent of James Agee and Walker Evans in *Let Us Now*



*Praise Famous Men* than of the typical work on pollution or toxic substances. The love and identification between the Halberts and their herd, the shared destiny of farmer and cattle, and their bewilderment at what has befallen give this book its eloquence.

So does *Bitter Harvest*'s structure as a detective story. Halbert is qualified as a chemical detective; before returning to his family's dairy operation near Battle Creek, Michigan, he had been a research chemist for Dow Chemical Company in Midland, Michigan. If Halbert had not had this background, the PBB story probably would never have been told. When milk production at his farm first dropped, and health problems began to crop up among Halbert's Holsteins, he did what any dairy farmer would do: consulted his veterinarian, changed the feeding pattern of his herd, consulted his veterinary texts, talked to his neighbors. When none of these provided an answer, Halbert began his own scientific experiments, feeding suspect components of his herd's feed to young calves. He also sent samples to university laboratories for analysis and asked the feed cooperative that had supplied him to do its own research.

What followed was very ugly. The feed co-op reacted by denying there was anything wrong with the pellets it had sold Halbert. It withheld information

from him about test results. Pressure was put on university scientists not to cooperate with Halbert. Government shipping vouchers for feed samples were cancelled. Contracts were suspended. After asking dozens of researchers for help, Halbert ultimately was forced to become his own research director; no one else was willing or permitted to see the problem through. That Halbert was able to do so is a tribute to his training as a chemist. Anyone might realize that when normally hardy mice died from a diet of co-op pellets, it meant something was seriously wrong with the feed. But Halbert knew enough to recognize a breakthrough when a researcher analyzing the feed pellets found bromine in a spectrographic reading. *How many dairy farmers in America could have?* Although hundreds of Michigan dairy operations were contaminated by the PBB pellets, only about 30 were affected severely enough to arouse suspicion, even in a farmer with Halbert's training. Rick Halbert happened to be one of the 30 farmers so affected. How many other PBB incidents occur around America with no research chemist in the factory, on the farm or in the neighborhood to do the detective work? How many cover-ups by government agencies succeed because there is no one around with Halbert's persistence? How many mysteries remain unsolved because the right chemical test is never hit upon?

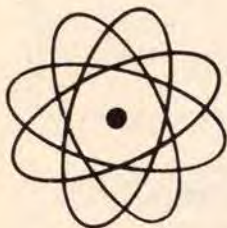
The cover-up by the feed co-op and its allies in government was one source of Halbert's problem. The other was the nature of the contamination; no one had found PBBs in feed pellets because no one had looked for them. PBBs do not belong in feed; they are not a "normal" contaminant, like fungus, mold or pesticide. They got there because Michigan

Chemical supplies magnesium oxide to feed companies under the brand name "Nutri-Master" and sells PBB as a fire-retardant under the brand name "Fire Master." Several bags of PBB were shipped instead of magnesium oxide; no one at the feed mill noticed the difference in names, and Rick Halbert and his herd were the victims. But since PBBs do not belong in feed and normally would not end up there, no one did the relevant tests. Someone eventually left a lab machine running longer than usual, and as a result the PBBs were detected, but once again it is clear that in most such cases even a persistent chemist-turned-farmer like Halbert would not have solved the case because no one could possibly test for all the thousands of chemicals that could be the source of the problem.

Halbert is no muckraker; *Bitter Harvest* is a story, not a polemic. A few people, Halbert's vet among them, cared about the people and cattle struck down by PBBs; but no institution did or even could. The feed company was motivated above all by the desire to avoid insurance liability. The laboratories were limited to activities funded by their grants. The Food and Drug Administration did try to protect consumers against contaminated milk—but was so cruel to the farmers in so doing that they now view the agency as their enemy. The Department of Agriculture, supposedly the advocate in Washington for people like Rick Halbert, appears utterly subservient to institutions such as the feed co-ops. And the politicians were worried about the budget.

It is easy to become outraged by this kind of institutional behavior. And such outrage may, in time, make it easier for future Rick Halberts to find the villains in their detective stories. But outrage, even politically effective outrage, will not prevent crime. As long as we continue to treat our arsenal of deadly chemicals, such as PBB, as the ordinary stuff of our economy, there will be error—even where there is no margin for error. And the whole regulatory apparatus designed to prevent "unreasonable" risks is no protection against the reasonable risk gone astray. □

*Carl Pope is executive director of California's League of Conservation Voters and an assistant director of the Club's Conservation Department.*



In this issue, *Sierra* focuses on two kinds of works never before reviewed in these pages—a novel and a movie. There have been countless novels and films about wilderness, wildlife and mountain-climbing, the traditional outdoor issues that formed the basis of the environmental movement. But the pervasion of popular culture by more technical environmental issues is really quite new.

It has taken years, but energy policy has finally stepped from the pages of environmental impact statements, financial reports and technical documents onto the pages of a current best-selling novel, *Overload*, and even into a popular new film, *The China Syndrome*.

At first glance, these works form a striking symmetry. Both deal with nuclear power in California; both allude to the state's largest utility company. Both involve environmental protest and utility defense. But *Overload* endorses the industry's view of energy policy—that more energy is needed and more must be provided—while *The China Syndrome* examines the consequences of that view.

A nuclear reactor is a machine; what happens when people get in its way? In *Overload*, it is the enemies of nuclear power who are the problem. In *The China Syndrome*, ironically, the problem is its friends. —*The Editor*

## Casting the Environmentalist as Villain

JOHN KOLESAR

*Overload*, by Arthur Hailey; Doubleday & Co., New York, 1979. Cloth, \$10.95.

IT ISN'T OFTEN nowadays that you get a novel in which the villains are environmentalists and the hero is an electricity and gas company. Arthur Hailey's *Overload* is such a novel. It makes about as much sense as your monthly electricity bill but is not as much fun to read.

Hailey is not the kind of writer who pretends to turn out literature. Entertainment is his game, and he has done well at it. Among his previous books are such works as *Hotel*, *Airport*, and *Wheels*. His books often end up as movies or television shows.

So it would not be fair to analyze his new book on the basis of literary merit. It has none.

The question is, does it work as entertainment? The answer is that it works about as well as a television commercial—one of those public-spirited announcements in which some graying-but-still-handsome executive tells you with great-sincerity how some worldwide energy conglomerate is just folks trying to help other folks. The novel, in truth, can be considered one long commercial

for your enlightened power company.

Hailey pads out his pitch with a lot of incidents—terrorists bombing power stations, blackouts in California, a couple of love affairs, dead bodies every few pages, a holocaust or two. It ought to be something to see in Panavision.

But you know you are in trouble right from the start when you meet the hero of the novel. His name is Nim (short for Nimrod) Goldman. If there is one clear rule in literature, it is never to trust a novel whose hero is called "Nim."

Our hero is quite a guy. He is vice president, planning, of Golden State Power and Light. He is the company spokesman who would like to let the public know the terrible things the environmentalists and regulatory agencies are doing—delaying nuclear-power stations



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and coal-burning stations, among other villainies. But his company is afraid to say this stuff forcefully and keeps him under wraps.

Nim, besides always being right about power issues, is also a hell of a guy with the ladies. He is married to a beautiful woman, but he is irresistible to every woman in the book and has this fatal flaw: he can't say no. Fortunately, he always lives up to the expectations of these females, and so they all walk away happy. In fact, Nim is such hot stuff that his old college roommate, who finds he cannot father children, selects Nim to take his place with his wife one night in order to conceive a child. Old Nim, ever a friend in need, gives the roommate's wife one glorious night, and by the end of the book she is happily pregnant.

You can tell from this that anyone who questions Nim's views has got to be either stupid or evil. And that's where the villains come in. First there is the Sequoia Club, which opposes every application to build a new power plant. Conservation should be used to cut the need for power, is the club's single-minded answer. The club is portrayed as sincere but wrongheaded. Unfortunately, the Sequoia Club falls in with some bad people—Davey Birdsong, a loudmouthed opponent of the power company, and even worse, Georgos Archambault, a terrorist from Yale who blows up power stations for a living. The Sequoia Club secretly gives Birdsong some money, and he funnels it to Archambault to keep him supplied with dynamite and alarm clocks and things.

In the beginning, the public is solidly taken in by the Sequoia Club and Davey Birdsong. Even when Nim angrily tells the truth at a public meeting, he makes no headway. In the end, the terrorists are exposed, Archambault is ground up by a turbine, Birdsong is arrested, the Sequoia Club is disgraced, California has daily power blackouts, the United States devalues the dollar down to a dime, and Nim is a public hero.

All of this might be dismissed as inconsequential junk. Junk it is, but it could have consequences. On his track record, Hailey's book is likely to be popular on the supermarket bookshelves and may wind up on film, even though he does not write as well as your average

power-company P.R. man. And beneath the tawdry plot there is an even more tawdry message.

Hailey's book is an apology for the big-power advocates. The issues he deals with are debatable. A trash novel is not the right place to debate them. Hailey stacks the deck by putting the power-company position in the hands of an attractive hero (at least he seems to think old Nimrod is attractive). He makes the environmentalists repulsive. And his use of the Sequoia Club, which is clumsily modeled on an actual organization (the Sierra Club) that has won general respect, is dirty pool of the worst sort.

In other words, the book is not just plain junk. It is pernicious junk.

*John Kolesar has been director of the Center for Analysis of Public Issues and, most recently, Sunday editor of the Trenton Times (New Jersey) newspapers. Reprinted with permission of the Trenton Times.*

## The China Syndrome: A Movie Review

FRANCES GENDLIN

**D**URING THE OPENING scenes of *The China Syndrome*, I wondered why I was spending my Saturday evening watching a film about the dangers of nuclear power. Don't I dwell on environmental problems enough during the week? But these thoughts disappeared almost immediately as I became totally absorbed in the plot, engrossed by the compelling performances of Jane Fonda, Jack Lemmon and Michael Douglas. I also later realized, somewhat to my surprise, that I had learned a few things about nuclear power plants I hadn't already known.

*The China Syndrome* is a powerful film with a well-thought-out and frightening plot, in the course of which the workings of a nuclear power plant are explained clearly for a public audience, along with an even clearer, more urgent and persuasive account of the dangers that accompany the generation of nuclear power. Some technological risks are inherent, and they become even more likely to prove dangerous when human failings are also important factors. Far more than just a technical exposition,





Reporter Kimberly Wells (Jane Fonda) and cameraman Richard Adams (Michael Douglas) apprehensively observe events at a nuclear reactor's control room in *The China Syndrome*.

*The China Syndrome* especially emphasizes the contribution of human weaknesses to the dangers of nuclear power, in what one hopes must be a caricature of utility company executives; their behavior in scene after scene ranges from extreme avarice and lying, attempted homicide and corruption to the more socially accepted corporate activities of trying to intimidate and confound all around. Although the technology may be imperfect, the movie tells us, it is human behavior that makes the difference.

Because the intense action takes place in the context of a moral dilemma, *The China Syndrome* is a chilling story. Jane Fonda plays a Los Angeles television reporter who has been restricted to minor assignments, although she feels she is ready to cover hard news. The station manager disagrees. But when Fonda and an independent cameraman, portrayed by Michael Douglas, go to California Gas and Electric's nuclear power plant at Ventana to film a routine story, they happen to be in the visitors' gallery above the control room during a near-disaster and, against orders, the cameraman shoots secretly through the window, managing to get the tense moments all on film. In this important scene, which we see several times during the movie, Jack

Lemmon, the plant engineer, handles the incident in only a few minutes, yet we see sharply his concern, his growing and acute understanding of the severity of the problem, his greater fear, then his desperation, and finally his total relief as the situation is resolved under his control.

The film is rushed back to the television station. Will the station manager let this powerful drama be shown as the lead news story that evening? No. After a conversation with CG&E's publicity director, he won't let it be shown at all; he deposits the film in the station's vault and lets it be known the film is there to stay. Not true. The cameraman realizes there's much more to the accident than CG&E admits (they claim it was a minor event involving a faulty gauge) and although he doesn't know exactly the possible extent of the problem, he steals the film and takes it to a public hearing on the proposed construction of a new nuclear power plant at Point Conception. It's very important to the utility company's plans for the new plant that the film not be shown, and it turns out to be even more crucial to the contractor, who had continually certified the Ventana plant as safe.

From here the plot becomes gripping, as Fonda and Douglas search for the truth

## The Pendulum and the Toxic Cloud

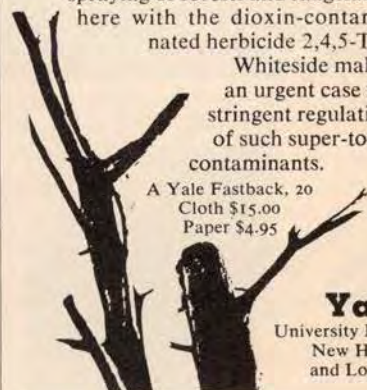
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about something they suspect but don't really understand, as Lemmon's own moral dilemma concerning something he does understand and believe in vies with his increasing concern for the public safety and his own. Murders are committed, lies told, threats made and much, much more. The conclusion leaves the audience stunned and thoughtful.

"The China Syndrome" of the movie's title is a piece of black-humor, nuclear jargon referring to the theoretical consequences of an accident in a nuclear power plant, should all so-called fail-safe mechanisms fail. Uncontrolled heat could melt the core and, if uncontained, gravity would send it gradually sinking toward China. Of course, this wouldn't really happen; once the heat encountered underground aquifers, a gigantic explosion could ensue, spreading intense radioactivity over the land, rendering southern California uninhabitable for years. The ultimate accident does not occur in the film, although it's not clear until the very closing moments that we will be so spared.

Is *The China Syndrome* a farfetched, antinuclear polemic, deliberately exaggerated to make a point? No, not to those of us, for example, who have been following the events at Three-Mile Island nuclear plant—or the case of Karen Silkwood, a worker in an Oklahoma plant producing nuclear fuel rods. Silkwood's claim of plutonium contamination owing to careless practices in the plant, her offer to prove it, and her still-mysterious violent death in a car accident while she was on her way to meet with a reporter, all mirror episodes portrayed as fiction on the screen.

Like an earlier film, *Chinatown*, in which the problems of water diversion to Los Angeles were so dramatically portrayed, *The China Syndrome* turns out to be an excellent environmental film. Despite two uncomfortable scenes in which environmentalists testifying at the Point Conception hearings were portrayed somewhat as caricature (and during which I squirmed in my seat), the film is one that environmentalists and their friends should see. And people not their friends. And as for the caricature of environmental dramatics—well, I think we should be able to laugh at some of our own sometimes idiosyncratic behavior. *The China Syndrome* gives us a chance to do just a little of that, and much more.

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# Three Mile Island: Life Imitating Art

FRANCES GENDLIN and DAVID GANCHER

Many people do not go to movies and might have missed the fictional portrayal in *The China Syndrome* of an accident at a nuclear power plant. But owing to the extensive serious news coverage of the real accident at Three Mile Island, it is unlikely—if not impossible—that very many people can now fail to realize some of the real dangers associated with nuclear power, whether or not they have mastered the intricate technical details of power generation itself.

In the area of nuclear power, the majority of the public seems to have followed blindly the recommendations of government, politicians and scientists at a time when much of society has been questioning the power and actions of those same authorities in connection with other political issues. Perhaps the complex workings of nuclear power seemed too difficult to understand, the dangers too farfetched and abstract to be real—a question of “what ifs” and “one-in-a-million chances.” But no more. The major news media, the television networks, the newspapers have not only covered the daily story in excellent detail, including lucid explanations of how light-water reactors work—when they are working properly, that is—they have also described clearly the fumblyings and inconsistencies of people, as official stories of what was happening changed and contradicted themselves over and over again.

The contradictory and confusing responses to the terrifying accident were no surprise to veteran observers of corporate reaction to embarrassing events. Months before the Three Mile Island accident, Peter Harnik wrote about the Seveso dioxin tragedy for this issue's Guest Opinion (page 77), sketching a familiar scenario: “The guilty corporation will first deny responsibility for the incident and then downplay its severity; next, a rash of apologists will explain how safe the poison actually is while others remind us how trivial are the consequences compared to the large number of highway fatalities . . .” All these themes were frequently heard in the chorus of comment from Metropolitan Edison, from Babcock & Wilcox (the company that built the reactor), from local and federal officials, ambitious politicians and others. Don Curry, a public relations man for Metropolitan Edison, at first tried to soothe anxious reporters. “The reactor is being cooled according to design by the reactor cooling system and should be cooled by the end of the day. There is no danger of a meltdown. There were no injuries, either to plant workers or to the public . . . Everything worked. The shutdown was automatic.” Another utility spokesman added, “We are not in a China Syndrome situation.” As the accident grew more serious, with a hydrogen gas bubble threatening to destroy the core, and with radioactivity leaking and being leaked deliberately into the air, the official pronouncements continued unabated. Jack Herbein, Metropolitan Edison's vice-president for power generation, continued to claim: “This accident is not out of the ordinary for this kind of reactor. It was not unexpected.” He had earlier protested, “We didn't injure anybody. We didn't overexpose anybody. We didn't kill a single soul. The release of radioactivity off-site was mini-

mal.” And, finally, James Schlesinger, the Energy Secretary, reasserted his faith in nuclear power: “Nothing is riskless, but when we weigh the risks overall, the advantages of nuclear power exceed the risks.”

The Three Mile Island accident occasioned a national crash course in nuclear power's problems—including some unexpected derivative quandaries, such as the logistical difficulties of evacuating rest homes, hospitals, or prisons. The public has learned that energy issues permeate the entire fabric of society, for the accident had many far-reaching and unexpected results and might have had many more.

The rest of the public has had to join environmentalists in the effort to understand the officialese that surrounds and attempts to defuse the nuclear issues. Consider, for example, this mind-boggler from Harold Denton, chief of reactor operations from the Nuclear Regulatory Commission. “If there is no bubble in the vessel,” he hypothesized, “the temperature of the core can be reduced through the present cooling mode. I would expect to continue to cool the core in this method. You can go indefinitely in this mode providing that the equipment that is operating in this mode holds up.”

What will be the political consequences of the accident? Susan Steigerwalt, who chairs the Club's Energy Committee, commented that the government's immediate reaction to the accident was partly political. “The central question arising from this accident is the degree to which political considerations for the implementation of federal energy policy took precedence over the concern for public health and safety,” Steigerwalt said. “The decision not to evacuate the area surrounding the plant—even when a real catastrophe was considered possible—could only have been politically motivated; such an evacuation would have emphasized the dangers of nuclear power—at a time when federal policy still favors the development of nuclear power. A federal judge in California recently overturned the state's nuclear safeguard laws, ruling that states may not take independent action to protect their citizens from potential hazards of nuclear power plants because such measures would conflict with the federal policy of developing nuclear power.”

Other political reaction to the accident was strong. New York's Governor Carey asserted that the accident was “the end of the future for all nuclear power now” in New York. The Massachusetts House of Representatives approved, on April 4, a resolution asking Congress to order a moratorium on the licensing of nuclear power plants. The vote was a resounding 151 to 1.

Even while the Three Mile Island accident was making headlines, President Carter told a Democratic fund-raising dinner, “For the near future, we will have to continue to rely not only on coal but on nuclear power.” The accident, he continued, “will give us the knowledge and renewed concern” to improve the safety requirements of nuclear power plants. But the President's April 5 televised speech about energy policy mentioned nuclear power only tangentially and placed greater emphasis on conservation and solar power.



*Above: These two young osprey blend with their surroundings, rocks and bits of straw and grass. To confuse their enemies even more, the osprey young lie flat against the ground, becoming difficult to see. One of their parents will give an "all clear" cry when it is safe to get up.*

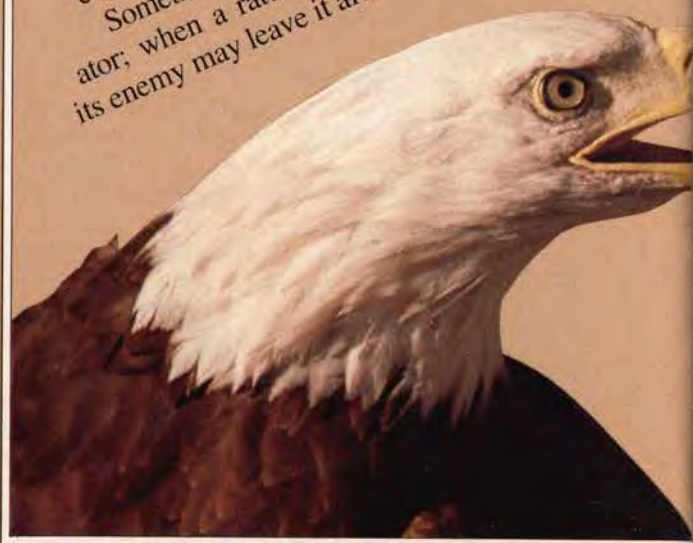


*Left: Here, a hoary marmot stretches on a sun-warmed rock after months of hibernation. Bears, squirrels, badgers and toads hibernate (become inactive and sleep much of the time) to avoid severely cold weather and to limit the amount of food they need when food is scarce. Some species, such as whales and whooping cranes, migrate to find seasonal food supplies and a favorable climate.*

*Text and Photographs by  
TUPPER ANSEL BLAKE*

When some human babies are born, they can clench their fists so firmly they could hang from a branch. A newborn infant put in water makes swimming motions as though it could swim on its own. The motions are strongest soon after the baby is born, and they disappear before the baby is a year old, as if the ability were most useful to infants. These reflex, or automatic, movements may have been survival aids for our ancestors long ago, when they had to fend off natural enemies. Not just humans, but all animal species have their own defenses. To survive, animals must have enough food, protection from weather and from predators; and they must have enough offspring for the species to continue.

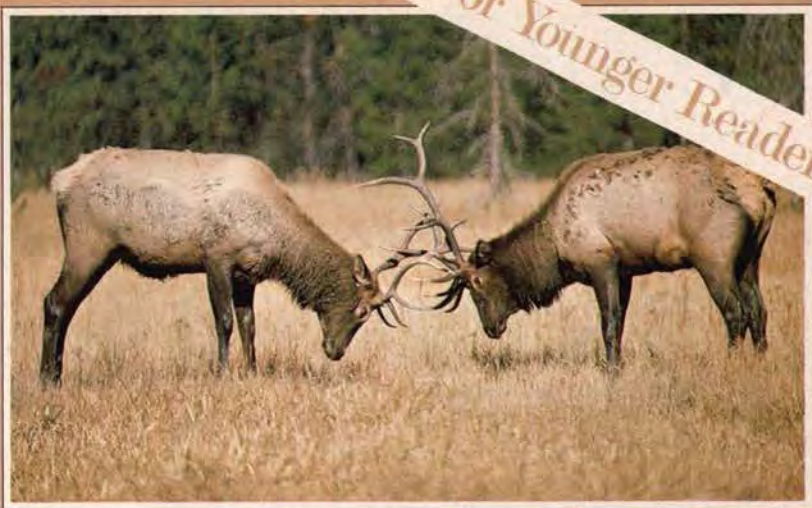
Sometimes it is enough just to scare a predator; when a rattlesnake shakes its rattles, its enemy may leave it alone. When a skunk



# How Animals Prote

stands stiff-legged, tail raised, it is warning that an attacker will be sprayed with a horrible scent—an experienced predator will choose other prey. Some species have developed powerful fighting tools, such as an eagle's hooked beak and talons, or the sharp teeth and claws of a bobcat. Antelope and deer avoid danger by running very fast. Just as humans protect themselves against cold weather by wearing extra clothes, wild animals are protected against severe weather by heavy coats they grow. Rabbits, bears, foxes, squirrels and many other species grow thicker, heavier fur for warmth in winter. In spring, you may see tufts of fur caught on twigs where these animals rub their bodies to remove hair they no longer need. Harbor seals keep thick layers of fat all year round to protect against the coldness of the ocean. Protection by the use of intelligence, an ability of many species, has been most highly developed in human beings. One of the most intelligent things humans do is preserve the natural environment, allowing animals to protect themselves and survive. □

*Tipper Ansel Blake is a photographer, writer and naturalist specializing in birds and mammals of North America. His photographs have been exhibited widely.*



**Above:** Wapiti, usually called elk, have few natural enemies. The oldest and youngest members of the herd are weaker than the rest and are sometimes attacked by coyotes or, more rarely, bears. But every winter wapiti have something besides predators to protect against—starvation. When heavy snows cover the grasses the elk eat, they migrate to areas with more plentiful food. As more country is fenced, however, fewer forage areas are available to wild animals.



**Right:** The horned lizard is quite flat; it can lie close to the ground and avoid being seen. If attacked, it will use its horns, which are actually strong modified scales, to defend itself. If both these protections should fail and an enemy catches the lizard by the tail, the tail will break off so the lizard can escape, and a new tail will grow in later.

**Below:** The harbor seal is the seal most often seen on the United States' coasts. Seal babies are called pups, and they drink very rich milk from their mothers to build up the heavy layer of fat all seals have to protect them against the coldness of the ocean. This adult's mottled coat of short fur is typical of the species.



# Protect Themselves



## Sierra Club Publications: Near-Weeklies, Monthlies and Occasionals

While conservation of the natural environment and protection of ecosystems are the main purposes of the Sierra Club, educating members and the general public always has been a basic part of the Club's program. Perhaps the most effective tool for education has been its publications. *Sierra* and the Club's books are, of course, prime examples, but there are a number of other, lesser-known publications as well. These periodicals and reports, usually in specialized fields, exist only to be useful, so I want to bring them to your attention.

Foremost among the limited-circulation publications is the *National News Report* (NNR), which is put out by the Club's Conservation Department. This almost-weekly (35 issues a year) runs from four to ten pages and frequently includes in-depth inserts on special current topics. It is mailed first-class on Fridays from San Francisco, mostly while Congress is in session, and reaches the great majority of readers the following Monday. It is this timeliness that makes the NNR so indispensable—news of environmental developments in Congress, state legislatures, government offices and in the courts arrives in time for readers to take appropriate action and tells how they can help. The NNR also reports on local and regional issues of national importance and on how the chapters and groups involved are working on them. It prints news of the Club itself, noting important policy or staff changes and providing highlights of board of directors' meetings.

For activists, or for others who merely want to keep abreast of the latest news on environmental affairs, the *National News Report* is a must. And it is a bargain, too. Its \$12-a-year subscription price barely covers the out-of-pocket costs of getting it out—postage alone eats up more than \$4. The NNR, as well as the four Sierra Club periodicals described immediately below, can be ordered from Club headquarters. Make

ROBERT A. IRWIN

your check payable to the Sierra Club, write the name of the publication(s) on the check, and mail it to Box 7959, Rincon Annex, San Francisco, CA 94120.

The *International Report* is the two-page newsletter of the Club's Office of International Environment Affairs in New York. It follows the Sierra Club's latest global efforts and reports on the United Nations' involvement in environmental projects. In addition, the *International Report* covers major conservation issues that arise in other countries. Its cost is \$5 for 40 issues a year.

The *Alaska Report* is the newsletter of the Club's Alaska Task Force. Appearing seven to ten times a year, it keeps task force members and all others interested in The Great Land up to date on the fast-moving political developments that will determine the fate of this incredible wilderness. The six pages, with occa-



sional inserts, also provide facts and background articles on Alaska's parks, refuges, forests, oil and gas pipelines, wildlife and wilderness. Subscriptions are \$5 a year.

The *ORV Monitor*, an eight-page bimonthly, keeps tabs on law and regulations for off-road vehicles (ORVs) throughout the nation, especially where ORVs affect wildlands. It reports on

field research into the problems caused by indiscriminate use of trail motorcycles and dune buggies in desert and dune areas, and into the effects of these vehicles and snowmobiles on wildlife. The *ORV Monitor* tells you how, when and where you can make your voice heard for environmentally sane regulation and use of ORVs. A subscription is \$8 a year.

*WIN*, *Sierra Club Wildlife Involvement News*, is published by the Club's National Wildlife Committee. Ranging from 12 to an occasional 24 pages, this newsletter deals exclusively with wildlife in all its aspects, both in the United States and abroad. Habitat, ecosystems, endangered species, predator controls, hunting, fishing and trapping, wildlife management and much more come under the purview of *WIN*. It informs and educates its readers and involves them in the work for sound legislation and regulatory mechanisms. *WIN* is mailed monthly, first class, from New York City and costs \$7 a year.

### Other Newsletters and Occasional Papers

Sierra Club members will find the four-page tabloid *Perspective* particularly enlightening about environmental issues that confront all North Americans, despite the newsletter's exclusive focus on California. *Perspective* is published about ten times a year by the Club's office in the state capital, Sacramento. While its prime purpose is to keep an eye on all environmental legislation and regulatory agencies, it also runs general, informative articles on California's problems with air and water quality, forest practices, land use, coastal protection, urban sprawl, parks, wildlife and wilderness protection—issues common to all America. First-class mail subscriptions are \$6 a year. Checks payable to *Perspective* should go to the Sierra Club, 1107 Ninth Street, Sacramento, CA 95814.

Of the publications to follow, none is distributed on a paid-subscription basis, and most are mailed first class. Their coverage is specialized, their distribution limited—as are their budgets—and only a couple appear on a regular schedule.

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*On the Loose* is the voice of the Club's Inner City Outings outreach program, in which young people are introduced to wilderness experience and led to an understanding of their natural environment. The newsletter forms a communications link and forum for the thirteen or more currently participating chapters—from northern Vermont across the country to San Francisco. It reports on their programs and offers help in organizing new ICO programs, gives tips on funding, and tells how to conduct an outings program once it has been set up. *On the Loose* is published three or four times yearly by the Inner City Outings Subcommittee of the Club's National Outings Committee. For details, contact Duff LaBoyteaux in care of the Outings Department at the Club's San Francisco headquarters, 530 Bush Street, San Francisco, CA 94108.

The *Population Report* is an occasional action alert on population policy issues, especially the use of population projections for land-use and other planning purposes. To be added to the mailing list, write to Judith Kunofsky at Club headquarters.

The informal digest of energy news published by the Club's 50-member National Energy Committee is *The Energy Report*. The committee's concerns are the development and use of all types of energy sources, along with such related issues as plant siting, utility rate structures and energy conservation. To receive the report, contact Gene Coan at Club headquarters.

The *Slickwatcher* zeroes in on the environmental problems caused by exploration for and development of offshore oil and gas. It's a monthly four-page newsletter, and in it the Oil and Gas Subcommittee of the National Energy Committee examines such topics as proposals for liquefied natural gas (LNG) terminals and pipelines, oil spills and new federal and state regulations. *The Slickwatcher* alerts readers to upcoming hearings and

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to deadlines for comments on offshore oil and gas leases. To receive this newsletter, contact Milton Oliver, 14 Concord Ave., Cambridge, MA 02138.

*Citizens' Update on Shoreline Policy*, CUSP, also concerns itself with the befouling of the sea and shores. It encompasses a great deal more, however. CUSP, a lively, very readable eight-page bimonthly published by the Club's Coastal Zone Task Force, keeps readers



current on all coastal beaches, marshes and waters, as well as activities and developments that affect their integrity. It reports on problems and successes and also alerts readers when letters or other actions are necessary. If you want to lend your eyes to the coast watch and receive CUSP, write to CUSP Sierra, P.O. Box 2692, Tallahassee, FL 32304.

### Position Papers, Special Reports and More

And that's not all. Besides periodicals, the Sierra Club has published more than 140 special reports, environmental studies, position papers and pamphlets. All are available from the Information Services Department at Club headquarters, most of them for 15 cents or less. The topics of these special publications range widely; they include wilderness,

public lands, Alaska, wildlife, environmental law, pollution, forestry and many more. Write to Information Services at Club headquarters for the latest literature list and order form.

In addition to all the foregoing are 53 more publications; the newsletters of the 53 chapters. Each member automatically receives the newsletter from his or her own chapter. Many of these are remarkably well-edited and professional-looking publications and do an excellent job of reporting on the environmental issues in their areas and on the activities of their respective chapters. A member interested in a particular region outside his or her own can subscribe to any of the other 52 newsletters—usually at a nominal cost (about \$2 a year). To see samples of chapter newsletters, contact the people who chair your chapter and publish its newsletter—they regularly receive most chapter newsletters on an exchange basis. They should also have a complete list of all the newsletter editors and their addresses.

The last of the Club's publications, put out by the smallest division of the Club, are also the most personal. An uncoupled number of the 274 Club groups publish newsletters that vary from simple, mimeographed schedules and reports to elaborate catalogues of activities and meetings. □

### W. Verde Watson Commemorated

W. Verde Watson, a life member of the Sierra Club and former Chief Naturalist at Mt. McKinley National Park, died in August 1978. Family and friends have contributed gifts in memory of W. Verde Watson to further Alaska education and research efforts. Donations may be sent to The Sierra Club Foundation, 530 Bush Street, San Francisco, CA 94108.

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*Most Corporations Have Contingency Plans  
for a Political Response to Any Mishap*

# The Lessons of Seveso

PETER HARNIK

*Peter Harnik, formerly of Environmental Action, was cocoordinator of Sun Day. He is now a consultant on social action issues in Washington, D.C.*

**W**HEN THOMAS WHITESIDE, a reporter for *The New Yorker*, returned not too long ago from Seveso, Italy, the small town north of Milan that was the scene of a major chemical plant explosion in 1976, he wrote a gloomy report of the two-year effort to decontaminate the area. (The report forms the basis for Whiteside's recently published book, *The Pendulum and the Toxic Cloud: The Course of Dioxin Contamination*, Yale Press, 1979.) The explosion took place at a factory owned by the I.C.M.E.S.A. Corporation, which is in turn owned by the Givaudan Corporation of Switzerland, in its turn owned by Hoffmann-La Roche, a Swiss-based multinational pharmaceutical firm. The Seveso plant manufactured 2,4,5-trichlorophenol, a substance used in the production of hexachlorophene; one of the byproducts of the manufacturing process is dioxin, an astoundingly toxic substance. When the plant exploded, a dioxin-loaded white cloud rose and settled over 1000 acres of Seveso, downwind from the factory.

The Seveso explosion began a tragedy that holds two important lessons for environmentalists. The first one is obvious: dioxin is extremely dangerous and should be banned everywhere. In Seveso, 81,000 domestic animals either died directly from poisoning or were put out of their misery by the authorities; hundreds of people experienced dizziness, nausea, diarrhea, impaired vision, liver damage, endocrine malfunctioning and diminished sexual drive; hundreds of children developed chloracne, a serious skin disease; a still-undetermined number of pregnant women spontaneously aborted or gave birth to deformed babies; much cropland and many orchards were contaminated. This lesson has only belatedly been heeded by the United States. In March the E.P.A. temporarily banned most uses of 2,4,5-T after a study indicated that women in Alsea, Oregon, had suffered an abnormal number of miscarriages following herbicide spraying in the region. But millions of pounds of the herbicide have already been sprayed.

It is the second lesson of Seveso—one I don't think even Whiteside fully anticipated when he went to Italy—that interests me more. This is the fact that the catastrophe was handled not as an extreme medical emergency justifying stringent measures, but rather as what can almost be described as a routine political problem.

When I've told people how badly the Seveso situation was handled, a common response has been, "Well, after all, what do you expect in Italy!" But, as you read these examples, think about our own country and how a similar accident might be dealt with here.

**Item:** The I.C.M.E.S.A. Corporation waited fourteen days before revealing to Italian authorities that there was dioxin in the white cloud that descended on Seveso.

**Item:** It took 23 days to evacuate "Zone A," the most contaminated part of the town. During that period, the authorities attempted to restrict access to the zone by allowing only ten persons to enter the area on weekdays—and twenty on Sundays. The townspeople somberly joked that dioxin wasn't as potent on the Sabbath.

**Item:** Although traffic was prohibited in Zone A and severely restricted in Zone B, the less-polluted area, one exception was made: the Milan-to-Como superhighway that bisects Seveso. Thanks to that decision, thousands of cars and trucks spread dioxin throughout Italy and the rest of Europe.

**Item:** Many thousands of tons of contaminated soil and debris were collected for high-temperature combustion that would neutralize the dioxin, but the local populace voted down construction of the special incinerator. The contaminated material was left in the middle of the town.

**Item:** Decontamination workers were issued "space" suits with hoods and face masks for protection. Yet the workers often frequented local bars after hours still wearing their decontamination outfits. Workers also drove uncovered debris-filled dump trucks through the streets of Zone B (which hadn't been evacuated), scattering dioxin dust in every direction. When some of the sloppiest workers were fired as a lesson, their comrades went on strike until they were reinstated.

For every strong measure that was proposed for a medical or public health purpose, a correspondingly weak, ineffectual or even counterproductive action was carried out through the political process. Moreover, the people received so many conflicting and confusing signals from their leaders (one politician offered to live in Zone A and drink dioxin-contaminated milk, only to be told that all the cows in the zone had been slaughtered to protect the public) that they found it easier and more rational to disregard everything they heard. This led to such bizarre occurrences as practical lovers illicitly using abandoned, contaminated Zone A houses as trysting places.

*When calamity does occur, we owe  
it to ourselves and the rest of the country  
to learn from it and change our ways.*

Could a Seveso-type accident happen in the United States? Certainly. If it did, would the aftermath be as badly botched? Quite possibly. Nothing in the Seveso story made me slap my forehead and say, "That could never happen here!"

There is, I believe, a widely shared feeling among environmentalists that a major industrial disaster would prove to the rest of the nation that we're "right" and that it's time to put an end to dangerous, polluting technologies. In anti-nuclear circles, particularly, one often hears, "One big accident and the people will shut the whole industry down!" Judging by the Seveso case—not to mention the recurring nightmare of major oil spills around the world—this won't happen. The guilty corporation will first deny responsibility for the incident and then downplay its severity; next, a rash of apologists will explain how safe the poison actually is while others remind us how trivial are the consequences compared to the large number of highway fatalities. Finally the townspeople themselves will seek to avoid the embarrassment and stigma of living in a disaster area by denying the incident's significance, criticizing health authorities and resisting inquiring reporters, photographers—and environmentalists. Meanwhile, the corporate culprit will hire a battery of lawyers, negotiate an out-of-court settlement and, if it plays its cards right, even gain public relations points for its plight.

Is there any way we can protect ourselves against such an aftermath? Yes there is—we can plan ahead. I suggest that we environmentalists carefully scrutinize our own towns, cities, neighborhoods or counties and reflect on what might go wrong. Are there factories nearby? What chemicals do they use? Is there an oil-storage facility? Is it in the flight path of the airport? How close is the nearest nuclear plant, and in what direction would prevailing winds blow radioactive particles? Are the railroad tracks in your area safe? Where do gas and chemical pipelines run? Is there a chemical dump?

A brief survey should give a pretty good idea of what parts of town are more dangerous than others—and why. Then comes the next series of questions: Who is responsible for

protecting and informing the public in an emergency? What information is available about local factories and the chemicals within them? Are the companies insured? If so, for how much money and what kinds of situations?

Once you have this information, it might be instructive to role-play an environmental disaster in the town. Get ten or fifteen people and assign the roles—the company president, the mayor, community leaders, a minister, worried parents, an environmentalist, a reporter, a scientist, a worker or two—and see what happens.

The sad fact is that most companies have contingency plans for a *political* response to any mishap, and the aftermath to the real emergency usually follows the plan closely. The environmentalist who sits smugly on the sideline saying, "This time it'll really shut them down," is often sadly disappointed. With military-like precision, politicians, the press, scientists and other prominent people flock to the defense of the corporation and seek to deflect the blame.

One last thought: since every disaster will be dealt with politically, strategy must be planned from a political perspective. Inform your representative now about the chemicals in your local factory and what harm they might cause, so that officials will have less reason to leap blindly to the company's defense. Write a letter to the editor of the local paper, pointing out the minimal insurance coverage an oil refinery maintains, and how little money an injured property owner would receive in the event of an accident. Talk to scientists at nearby universities in order to determine who is likely to give sober, cautious analyses of a chemical's risk, and who might offer to "bathe in that stuff and drink it for breakfast."

Obviously, no environmentalist is eager for a major industrial accident. Most of us are working to reduce environmental risk so that mishaps do not become disasters. However, if and when calamity does occur, we owe it to ourselves and the rest of the country to learn from it and to change our ways—not to find ourselves bickering, politically outmaneuvered and once more on the losing end of the battle. □

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