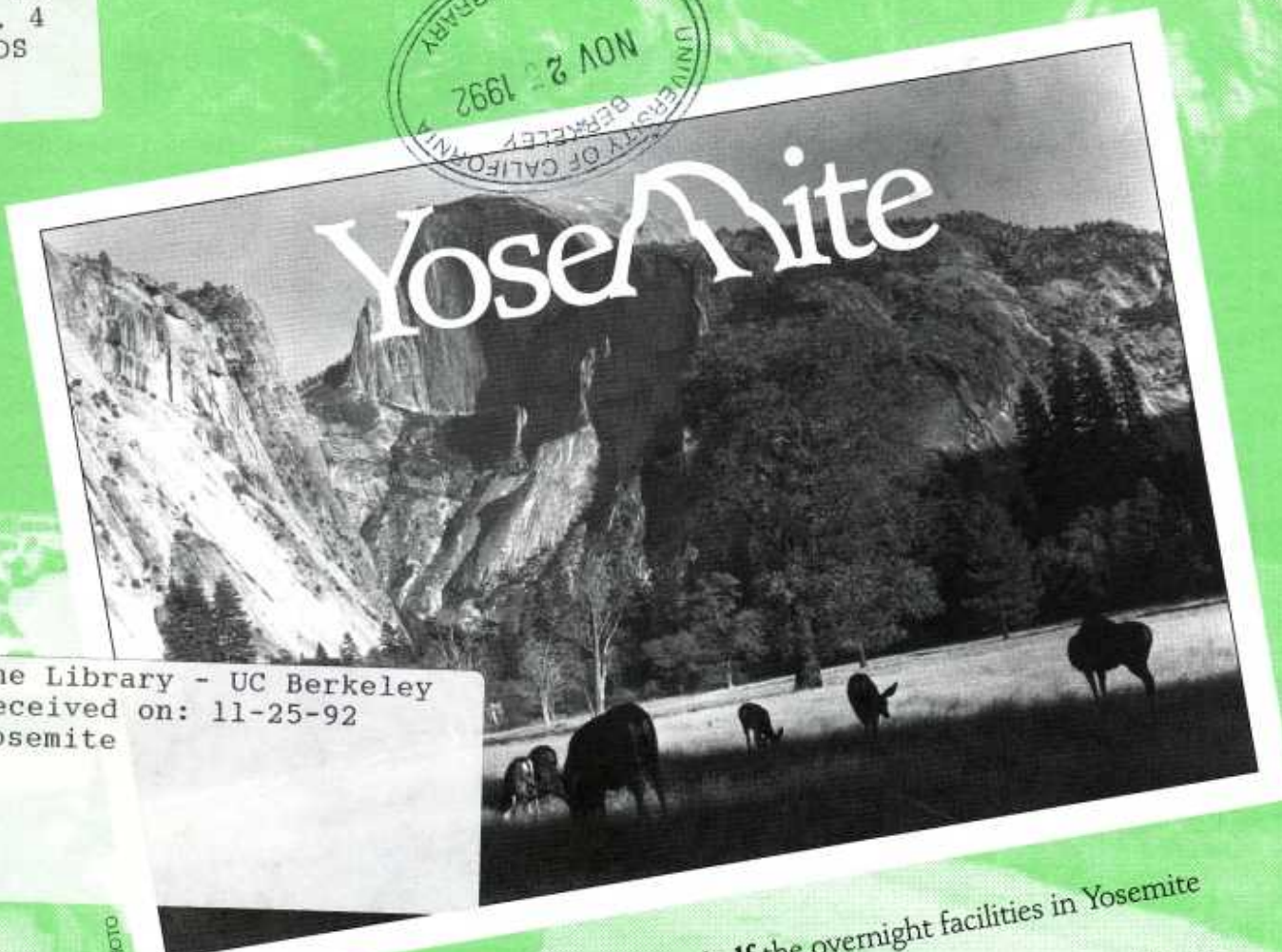


Re-Greening the National Parks

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Yosemite

NE PHOTO

I propose to eliminate half the overnight facilities in Yosemite Valley, and all the automobiles.

That's for John Muir, who lamented allowing those "blunt-nosed mechanical beetles" to puff their way into the valley and mingle their gas breath with the breath of pines and waterfalls. But that's only the first step in regreening the national parks.

I propose to close Yellowstone National Park for five years to automobile traffic.
Let visitors enter on foot or shuttle bus, maybe not even shuttle bus.

Use that period to develop a whole new system of circulation, and to decide how the park should really be used, based on respect and veneration for Yellowstone as a sacred place. I propose to close the transmountain road across the Great Smoky Mountains and by so doing make the wonderful wilderness of southern Appalachia whole again.

Michael Frome



NE PHOTO

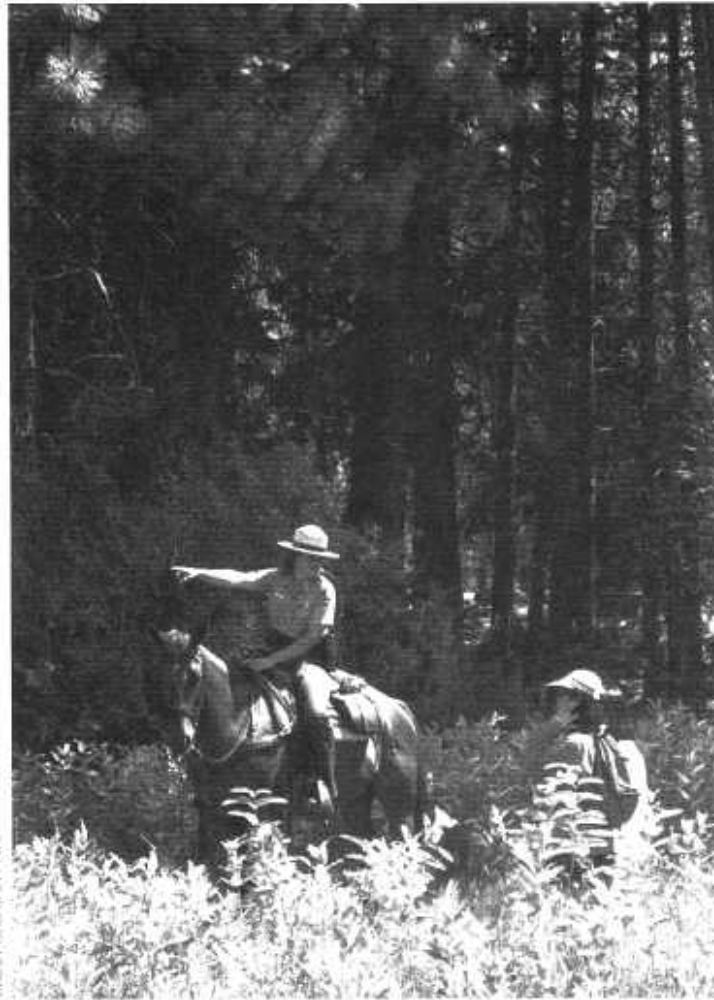
OUR SUPERCIVILIZATION IS TROUBLED BY POLLUTION, OVER-POPULATION, CORRUPTION, AND VIOLENCE, TO SUCH A DEGREE THAT A WOMAN CANNOT HIKE ALONE SAFELY IN A NATIONAL PARK AND THAT THE RANGERS MUST BE POLICE AS WELL. LET ME ADD NOW THAT IT ISN'T EVEN SAFE TO BE A RANGER.

In the greening process the administration of every park will focus on mountains, canyons, glaciers, forests, prairies, songful rivers, and the natural life systems they support. Their welfare will come first, before commerce and crowds. The same principle will apply to national historic and prehistoric sites; Americans will learn at last to walk lightly over the dead and to treat the ancient battlefields and structures of mud, brick, and stone as documents in trust.

Regreening won't be easy. The most devastating disruptions of park values, whether from within or externally, are commercial in nature. They manifest themselves in politics, but politicians generally are limited to short-term vision, extending to the next election rather than the next century. They ask: How many visitors did the park attract last year? How much money did they spend with the businesses in my communities? Why does the superintendent consider wilderness instead of facilities and access?

Years ago the National Park Service built a reputation as a bureau powered by professional ethics, free of political pressures. This is no longer the case. Democratic and Republican administrations alike and congressional power brokers have politicized the agency, influencing personnel selection and treating the parks like political pork. The National Park Service has caved in and lost its sense of mission, its commitment to protect national parks in perpetuity.

Compromise of principle with expediency is no way to run national parks. Regreening will bring a catharsis to the bureau, transforming it from a part of the problem to a leader in effecting the solution. It will refocus the entire organization, top to bottom, in a way that reestab-



BREAN CARICAN / NPS

lishes professionalism, justifies public trust, and ensures the highest level of stewardship.

Regreening is demanding and unending, for one challenge leads to another. The future of the national parks will never be established, the parks will never be secure, until the country recognizes and corrects the wrongness of its old national agenda. Experts may argue the need of a better park science program or a better fire policy or better elk management or emphasis on interpretation or more funding for more parks, but those are surface concerns. America needs to dig deeper to reexamine goals and institutions. America needs to reclaim its wholeness in order

to save its best parts.

Eddie Sue Judy, a prize student in my History 404 class at the University of Idaho, made that point clear to me. I tried to interest her in national parks history, but she had her mind set on Native Americans. We agreed, at least, that for her term paper Eddie Sue would discuss the question Why don't Indians go to national parks? But that wasn't the focus of her paper at all. It was only the title and opening line, a starting point to consider a larger issue about America and Americans that she insisted we both face.

Yellowstone in 1877, wrote Eddie Sue, was five years old as a national park, but already well

traversed by tourists. They were not the only ones in the park. Their pleasures in the "pleasuring ground" were disrupted by hundreds of Nez Percé Indians, followers of Chief Joseph, on the prowl. The Indians had been dispossessed from their ancient homeland along the Idaho-Oregon border. They had come from the fierce two-day battle in Big Hole Valley in southwestern Montana, where many of their women and children were slain, and they were in Yellowstone on their epic attempt to reach freedom in Canada.

In the first flush of white settlement, the Nez Percé, like other native people, living as God made them, had wished for peaceful coexistence. But they stood in the way of the Brave New World, in which everything, even the earth, became a commodity. The government's solution to the "Indian problem" was the reservation system, which provided places where aborigines could be Christianized, civilized, and eventually merged into the American melting pot. The Nez Percé in the process were denied much of their homeland. Although President Grant in 1873 had designated a portion of the Wallowa Valley as a reservation, Governor L. F. Grover of Oregon forced a reversal with a tough letter of protest: "If the [white] families should be removed to make roaming ground for nomadic savages, a very serious check will be given to the growth of our frontier settlements, and to the spirit of our frontier people in their efforts to redeem the wilderness and make it fruitful for civilized life."

Those who lived on reservations found themselves impoverished and their lifeways drastically changed, yet reservations became islands in the white tide where Indians could remember they were Indians. In that way,

BUT PUBLIC PARKS, LIKE ART GALLERIES, THEATERS, MUSEUMS, AND LIBRARIES, ENLIGHTEN AND ELEVATE INDIVIDUALS WHO COME TO THEM — THEY ENRICH SOCIETY IN IMMEASURABLE WAYS.

wrote Eddie Sue, they were similar to the parks, refuges where wild things could still live wild. And then to her main point regarding the 1870s: "It signified a juncture of two important themes: removal of Indians to reservations and withdrawal of parcels from the public domain for 'pleasuring grounds' and protection of natural wonders. Dispossessing native peoples and preserving native splendors might seem contradictory, but both policies had roots in a common national agenda and produced a common effect. They isolated tiny islands in a country created whole, and rendered the vast majority of remaining land fair game for pell-mell exploitation."

I remember also, when I was a columnist for *Field & Stream*, a reader writing to me in anguish, "Have we so much of earth that we can afford to sacrifice any part of it?" Those words make me continually aware of oil spills, nuclear disasters, release of toxic wastes, destructive dams and roads — plus the assorted external and internal threats to national parks — as symptoms of the larger issue. A national park is part of the world around it, and the futures of both are tied together.

Our supercivilization is troubled by pollution, overpopulation, corruption, and violence, to such a degree that a woman cannot hike alone safely in a national park and that the rangers must be police as well. Let me add now that it isn't even safe to be a ranger.

"Rangers Boost Firepower as Violence Rises" read a headline in the *Denver Post* of July 3, 1989. The article beneath it reported that rangers were ordered to replace their .38-caliber revolvers with .357 revolvers, providing them with nearly twice the stopping power. The change came after three separate inci-



JAMES SMILLIE

dents in four months, in which rangers shot and killed assailants who had tried to kill them. Assaults on rangers, the newspaper reported, rose sharply from thirty-one in 1986 to eighty-six in 1988. Some rangers, in fact, wanted Congress to give them a twenty-year retirement option similar to those already granted to agents of the FBI, Secret Service, and Border Patrol instead of waiting thirty years or reaching the age of sixty-five. That is how it goes with the "new ranger," better oriented to law enforcement than to resource protection.

The answer is greening the parks as the start to greening

America. Senator Harry Flood Byrd of Virginia understood and loved national parks. He was a conservative in all things, yet a political green. "I know that in them is to be found some of the most beautiful scenery in the world," Byrd declared on the Senate floor in 1963. "Through these areas the government is engaging in the highly constructive service of preserving and interpreting great scenic, scientific, and historic assets of our people." These noble thoughts are not much expressed in our time. Congress and the whole federal government have gone stale on the treasures of America that they are charged with

protecting. Little wonder that everything down the line has changed and slipped, reaching to field personnel carrying guns instead of the dreams of John Muir.

Regreening will kindle new recognition of public parklands as precious places. Whether administered by city, county, state, or federal government, whether covering half a block in the heart of an urban community or ten million acres above the Arctic Circle in Alaska, public parkland provides an outlet for physical, emotional, artistic, spiritual, aesthetic, and intellectual senses. There is really no way to place a dollar value on a "park experience." I visualize a park as an art form in itself, with the land base as the canvas and each person free to express himself or herself as long as he or she does not damage the resource or disturb or harm others. Disneyland and other "theme parks" serve different purposes; they make their profits as entertaining popcorn playgrounds. But public parks, like art galleries, theaters, museums, and libraries, enlighten and elevate individuals who come to them — they enrich society in immeasurable ways.

Each little bit of preserved nature serves its purpose. Nature belongs where people live, as part of life. The more of it in city, county, and state parks, the better the quality of community life. Nonetheless, a national park is a different kind of park. National parks approach the last representation of primeval life — to the degree possible within the artificial boundaries by which most park units were established. In a setting free of human intervention, the visitor absorbs the "feel" of nature — of plants, animals, and natural features — and the "weathering of the land" by winds, rivers, and other geological forces. Intangible values should prevail, and

A Ten-Point Program

1. Encourage all employees of the National Park Service to contribute consciously and conscientiously to making parks into genuine demonstration models of ecological harmony. Open channels to better internal communication, free of intimidation and risk. All organizations, once they become large and self-perpetuating, repress independent expression, but diversity of opinion and even dissent should be allowed to circulate, like a danger signal. Insistence on respect for ecological values, no less than disclosure of waste and abuse, should be welcomed as a commitment to make government more responsive, more worthy of trust.

2. Take the message from the setting to the people where they live. Russell Dickenson, while he was director, warned, "If we fail to make Americans aware of problems facing the national parks, and to involve them in choosing the right solutions to these problems, then we are failing in our responsibility as stewards of these public resources." But the public has largely been ignored, and well-meant criticism has been stifled rather than heeded, contributing to the agency's difficulties. Make "shared visions, shared responsibilities" the goal and process in public involvement.

3. Set standards for entry into the big parks and standards for minimum length of stay. Visiting a national park has been assumed as a right, but a sense of privilege and purpose must go with it. Americans should expect to leave the baggage of urban living at home and arrive with a recognition of park values and their responsibility to protect them.



THOMAS MORAN

4. Reduce automobile access in some places and eliminate it altogether in others. Downgrade park highways to simpler, slower roads. Substitute shuttle buses where feasible. Encourage restoration and resumption of train travel to the parks.

5. Determine the human carrying capacity of each park, then limit numbers of visitors to provide optimum enjoyment rather than maximum use. Get over the idea that national parks are

outdoor amusement centers meant for tourism. Business may benefit, but protection of park values must come first. History demonstrates that whenever a park is treated like a commodity rather than a sanctuary, degradation of the park always follows.

6. Utilize each national park as an outdoor museum of natural history, a field classroom of human history, a laboratory of science, a source of art, literature, and spiritual inspiration.

Pay particular attention to school classes and to the underprivileged, based on the premise that Conservation is a point of view involved with freedom and human dignity.

7. Establish vast quiet zones, free of automobiles, snowmobiles, dune buggies, motor-powered boats, and low-flying airplanes and helicopters, in order to ensure preservation of a peaceful environment. Apply this rule to low-level military training flights on the principle that true national defense embraces defense of the natural heritage.

8. Reevaluate the place of each concessionaire. Deemphasize resort hotels and motels in favor of simple low-cost hostels. If the service can be provided just as easily in a nearby community, close the concession. Clean out the souvenir shops.

9. Protect the integrity of national park water, air, and scenic and cultural resources and expand protection for lands surrounding parks through more effective coordination with bordering national forests and communities. Restrain the Forest Service from its damaging commodity-first programs of logging, grazing, and oil and gas exploration.

10. Reconstitute the National Park Service as an independent bureau, distinctly separate from the Department of the Interior and free of that department's chronic propensity for partisan politics and resource exploitation. Give it authority to challenge other federal agencies, like the Bureau of Reclamation and Federal Highway Authority, when their activities affect the parks.

CONSIDERING THAT WE NEED A REVOLUTION OF IDEAS AND IDEALS FOR ALL OF SOCIETY, THE REGREENED NATIONAL PARKS ARE MARVELOUS PLACES TO BEGIN.

regreening will restore them. Beauty, timelessness, solitude, silence, harmony, awareness, simplicity, freedom, balance, and order are the essences of humanity. The national park will stimulate questions deeper than When does Old Faithful erupt? Where is the best fishing? Where is the nearest beer? Rather than seek the excitement of snowmobiling in Yellowstone, rock climbing in Yosemite, rafting the Colorado River in the Grand Canyon, or helicoptering over the Na Pali coast in Hawaii Volcanoes National Park, the green visitor will search for undisturbed beauty and the serenity of wild places, in the spirit of John Muir.

From Mission 66 to the present, visitor comfort, facilities, and enjoyment have received a higher priority than protection and perpetuation of the natural systems. There are too many people in the parks at a given time, spending only hours where they should spend days learning to appreciate and understand the natural systems, and themselves in the process of doing so. Too much space is given to large luxury vehicles complete with water systems, electrical hookups, and their own TV sets. That must change. Considering that we need a revolution of ideas and ideals for all of society, the regreened national parks are marvelous places to begin. Every park is full of lessons to help in the transformation from the Age of Greed and Corruption to the Age of Caring and Integrity. For example, in 1893, when Gifford Pinchot, the youngest member of the National Forest Commission, went to the Grand Canyon, John Muir became his companion. And when Pinchot prepared to kill a tarantula, Muir stopped him with soft, strong words. "It has as much right here as you have."

Let us appreciate anew the

rights of the tarantula, the rights of all wild creatures, and the rights of trees and plants — all of them, including those derided in the controlled human environment as weeds. In the primeval landscape, all life is free and purposeful. Often I'm reminded by experts of imperfections in what I see to be wild, as a consequence of human intervention and influence ("the Indians deliberately set fires, you know"), but that's all the more reason to leave it be. Where better than a national park for the earth to restore itself?

The National Park Service, as we know it now, cannot provide the necessary leadership. The influence of the director has steadily declined; he follows orders from assorted political supernumeraries in the Interior Department. Consequently, the Park Service fails to speak on issues that degrade the parks; it pussyfoots around the issues and answers in cautious, politically acceptable terms. The bureau has lost professional stature and its respect in resource management, historic preservation, and park management. It postures and plans, but the plans go on the shelf, to be updated with more posturing a few years later. It dreads opening the planning process to full public participation and the accountability attendant to the process.

The bureau hierarchy dreads the input of its own people. When I interviewed Gary Everhardt, the former director, at Waynesboro, Virginia, in 1985, he volunteered his views on whistleblowing: "I just don't believe in it. My approach is, 'If you've got a problem, come talk to me about it. We'll resolve it.' Whistleblowing generates a way of saying, 'Well, I'm going to squeal on you but I don't have to be confronted with it.' I think the accuser ought to stand up and confront the person he's

talking about. These people don't seem to be responsible for their actions."

But the concerned employee has the legal right to "go public" when he or she feels that internal channels are inadequate. As the Civil Service Reform Act of 1978 stipulates, employees are free to make public without reprisal, or fear of reprisal, information concerning acts or failures to act by their employer which they believe harmful to the public interest. And the Code of Ethics for Government Service opens with a declaration that "any person in government service should put loyalty to the highest moral principles and to country above loyalty to persons, party or government department."

Regreening the parks is more than institutional; it is personal and individual. It begins with thee and me. In 1985 I climbed Mauna Loa, the world's largest volcano, a formidable challenge. I ascended to more than thirteen thousand feet. At times I thought I would never make it, but I kept putting one foot in front of another. I felt empowered, realizing anew that the greatest reward comes from doing something on one's own that demands an expenditure of personal energy, that yields the feeling of self-sufficiency away from a supercivilized world. I reflected on the early Hawaiians making their way to the top without benefit of shoes, backpacks, or freeze-dried food, living close to nature as God made them.

Native Hawaiians speak of 'Aina, the traditional love of land, or reverence for life. Their poetic oli, or chants, and the hula recount stories and traditions of humankind woven in the natural universe. Indigenous peoples the world over express their kinship with stars, sun, moon, forests, water, and wildlife through similar rituals. The

Navajo and Hopi in the Southwest have their sacred mountains, to which they turn for naturalness, healing, growth, and self-realization.

Each person needs his or her own sacred mountain. I visualize a national park as my sacred mountain even when, as in the Everglades, there is no mountain at all. It speaks to me as a place of spirit. It tells me that transforming society begins with the person. Stealth bombers and nuclear weapons will never force nations to join in recognizing the limitations of a fragile earth, but if I pledge allegiance to a green and peaceful planet, and if others do likewise and we believe strongly, we will make it happen.



Michael Frome is a noted conservationist and author working as a faculty member of the Husley College of Environmental Studies in Bellingham, Washington. He has written a number of books about national parks, wilderness and the outdoors including Battle for the Wilderness and National Park Guide. In 1986 he received the Marjorie Stoneman Douglas Award from the National Parks and Conservation Association for his many years of work on behalf of the national parks. This article is taken from Chapter 14 of Frome's latest volume entitled Regreening the National Parks, and is reprinted with the permission of the University of Arizona Press and the author.

Fire Flowers

Michael Elsohn Ross

April 13. It is a perfect day for climbing up a steep hill. After last night's rain the air is temporarily free of oak and grass pollen. Clouds of it have been falling for the last few weeks. Earlier today I scrambled up a steep lush grassy slope, dodging impressive stands of poison oak, to verify what I only could guess through binoculars. From my home in El Portal I had seen something I never noticed before, a band of light green plants across the flanks of Eagle Peak.

Eagle Peak is a large metamorphic outcrop perched on the south facing slopes of the Merced River Canyon (there's also an Eagle Peak in Yosemite Valley). The canyon below it was

sleep poppies lapped against my calves. Above me the slopes were a patchwork purple, orange, pink and the mysterious

light green. I rose toward the light green swath choosing a route that kept me close to the skirted toyons, chamise and oaks. Below their blackened trunks grew a thicket of sprouts which I planned to grab hold of if I slipped. One slide could turn easily into a fast tumble to the rocky creek bed a hundred feet below.

When I finally reached

the edge of the mystery plants, I stared in wonder. My guess was right and I was awed by the sheer power of fire. I saw robust fields of a plant I had only known before as a lonely uncommon individual. On this wet, warm spring, two years after a sum-



Astragalus leaves are ladders

mer inferno, I was witnessing the most recent reign of *Astragalus congdonii*.

The *Astragalus* genus is one of the largest in the pea family with nearly 2,000 species worldwide. Most of the California species are found in arid regions. Only two grow in the Central Sierra foothills. *Astragalus gambellianus* is a diminutive annual with lilac-colored blooms, while Congdon's *Astragalus* sprawls up to three feet across with foot-long sprays of white flowers. Many *Astragalus* species grow rattly pods and are therefore called rattleweeds. In fact, the Greek word *astragalos* refers to the ankle bone of horses which was used for making dice. Other species, called locoweeds, are known for their tendency to make cows act crazy. Locoweeds possess high amounts of selenium extracted from the soil, and a cow that eats too much selenium ends up in need of a therapist.

What had once been an impenetrable fortress of shrubby chemise was now a pea field, and the secret of the rattleweed's success lay hidden beneath the rocky, charred soil. As residents of El Portal had watched 30 foot flames dance

through the chemise, they couldn't see the soil changing. Charcoal and ashes are obvious reminders of fire, while newly altered soil is only seen through a change in vegetation. Most peas are fast reproduction plants and contain nodules of nitrogen-fixing bacteria on their root. These bacteria take nitrogen out of the air and provide their host with the needed nutrient.

I knew that fires vaporize enormous amounts of nitrogen and had assumed that post-fire soils were nitrogen poor. This would explain why peas were abundant after a fire. However, recent research conducted in Yosemite by the Riverside Fire Lab revealed that even though the total nitrogen amount decreases after a fire, the amount of useable nitrogen, nitrates and ammonium increases by several hundred percent or more. Add to this an increase in phosphorous, potassium, and trace metals, such as molybdenum and zinc, and you have monster plants.

Yosemite National Park contains six threatened and endangered plant species, and 83 plant in all that are sensitive due to their limited distribution and potential for future habitat disturbance. All of the plants listed as threatened or endangered grow in plant communities where natural fire would normally occur a 5 to 10 year intervals. Two plants listed as rare by the State of California are named after the same Congdon associated with the rattleweed on Eagle Peak. Joseph Whipple Congdon collected Congdon's *Lewisia* and Congdon's *Rusty Yarrow* nearly one hundred years ago before the era of fire suppression. Were these plants more abundant at that time?

Fire has a green thumb. Plants that haven't been seen for years flourish after a fire. Golden ear-drops is typical of many species



It all started when it ate that strange weed!

burned in August of 1990 by one of two major fires on the western edge of Yosemite. Now there is little sign of scorched earth. My climb up the canyon walls was a wade through a sea of flowers. Owl's clover, lupine, popcorn flowers, bird's eye gilia and

JOSEPH WHIPPLE CONGDON



of plants that occur only after fires. This stately 4 foot tall relative of bleeding hearts grows in golden fields below McCauley's Ranch on the Foresta Road where dense chaparral plants once proliferated. Their seeds may lie dormant for half a century or more until a fire creates the conditions for it to thrive.

Before 1988, *Mimulus filicaulis*, a rare monkey flower which is found only in Mariposa and Tuolumne Counties, had been sighted in just a few locations. After the Stanislaus complex fires, which raged along the western park boundary in August of 1987, populations of this

Cove on the South Fork of the Merced River he discovered *Astragalus congdonii* and *Phacelia vallicola*. *Eriophyllum congdonii* and *Lewisia congdonii* were found in the main Merced River Canyon.

Who was Congdon and why were so many plants named after him? Although Joseph Whipple Congdon earned his livelihood as a lawyer, his passion was botany. After serving a year as a member of the Rhode Island House of Representatives, he came west in 1880. Congdon was a keen observer and collected several new plant species in Sonoma County that had been overlooked by other botanists.

From 1882-1905 he practiced law in Mariposa and thoroughly botanized the region. At Flite's

On ranches in Mariposa County, Congdon collected another new species of *Phacelia* (*Phacelia congdonii*), a lomatium (*Lomatium congdonii*), a monkey flower (*Mimulus congdonii*) and a white lupine (*Lupinus deflexus*) known only from the Mariposa Creek drainage.

Each summer he made a collecting trip into the Yosemite high country. In his lifetime he amassed an herbarium of 10,000,000 species which now resides at the University of Minnesota.



ALL DRAWINGS BY MICHAEL ELSON ROSS

fires on rare and endangered plants he said, "The A-Rock fires refute conventional wisdom that fires are detrimental to rare and endangered plant species. The re-appearance of rare plant populations underscores the need for additional research on the role of fire in protecting these plants."

Michael Elson Ross is a talented naturalist, seminar leader, and author. He has written a number of children's books published by the Yosemite Association. Recently Millbrook Press released Michael's newest work, Become a Bird and Fly!, illustrated by Peter Parnall. He resides in El Portal where he reports on burning issues in the community.

monkey flower began to appear where it had never been seen before. By 1992, it was known from twenty new sites.

Perhaps many of the plants listed as rare or endangered are threatened more by fire suppression than any other factor. Fire is an integral part of natural systems, and if we are to preserve individual species we need to allow natural processes to take place.

When I spoke with Jan Van Wagtenonk, the park research scientist, about the effect of

are adequately designed and manufactured and cannot be penetrated. Some persons have had success situating the canister at the base of a large bush where reaching it is more difficult.

The question that will be answered as the canisters get more use is: are the plastic cylinders really bear-resistant? A couple of cases of canister failure have been reported, but most users have been quite happy with the effectiveness of the containers.



MIKE FLOYD/NPS

Bear-Resistant Food Canisters

The latest development in the eternal conflict between black bear and backpacker in the Sierra Nevada wilderness is the bear-resistant food canister.

These new plastic devices weigh about three pounds, fit inside a backpack, and are reportedly capable of holding up to a week's worth of food for one person. Retail price for the canisters is about \$70, and the concessioner in Yosemite rents them for \$3 per day. The National Park Service, though it has not made use of such canisters mandatory, is urging their use in the park.

Canister users are directed to place all their food and garbage in the device and simply place it on the ground near their campsite. Theoretically, though a bear may have easy access to the food containers, the canisters (which were tested by bears at the zoo)

For more information contact the Resources Management Division, National Park Service, Box 577, Yosemite, CA 95389 or phone (209) 372-0317.



Scientific Research and the National Parks

The National Park Service (NPS) protects and preserves some of the nation's finest examples of the nation's natural and cultural heritage. Rugged mountains, desert solitude, dynamic beaches, historic battlefields, and rare archaeological sites — in all, the system includes nearly 80 million acres in 361 units. It is a system emulated around the world, a distinctive contribution of the people of the United States to world conservation.

The 1916 Organic Act, still in effect today, provides the basic statutory authority for the NPS, declaring its mission to be

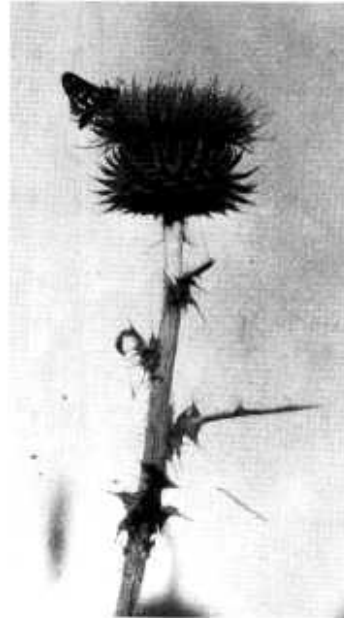
to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations. (16 U.S.C.A. Sec. 1)

At the time the 1916 Organic Act was written, it was innovative and far-sighted. Protection, it was thought, was the key to the conservation of park resources. We now know, however, that accomplishing the mission of the Park Service requires far more than passive protection; it requires sound understanding of park resources, their status and trends, the threats they face, and the measures needed to correct or prevent problems in these dynamic ecosystems. We now know that balancing the call to protect resources and the call to provide citizens with opportunities to enjoy the parks is a constant challenge.

The Importance of Research

The 1916 act's mandate has been invaluable in setting a basic course for the NPS, but it is insufficient to guide the agency in a world of accelerating change. Informed resource management is impossible without science in

Botanical studies in Yosemite have investigated such species as Indian Paint fungus, non-native bull thistle, and horsetails.



NPS PHOTOS

its broadest sense — that is, the acquisition, analysis, and dissemination of knowledge about natural processes and about the human influences on them.

Protecting the resources of the national parks (in this report "park" refers also to national monuments, seashores, historical park and other NPS units) requires scientific knowledge, and an increasingly sophisticated application of that knowledge. The problems faced by the parks today are too many and too complex to solve without the help of science. Threats to indigenous species caused by

tion, and management of problems. Science supports resource management so NPS staff can manage park resources wisely, and it supports interpretive programs for the public. Science today is an investment in the future of the parks.

With the 20/20 vision of hindsight, any examination of the national park system can uncover many cases in which a lack of understanding of park resources has led to problems — degradation of resource quality, increased conflicts between visitors and resources, or the escalation of minor issues into major problems. Visitor facilities were developed in habitat critical to endangered species before the concept of endangered species was appreciated.

Exotic fish species were introduced to improve recreational fisheries without thought to the implications for native species and the predators that feed on them. Fire suppression led to unanticipated changes in the distinctive character of forests.

A common thread seen in virtually all such examples is that almost invariably, the initial establishment and management of the parks was done with inadequate understanding of ecological systems. Today, our information base is substantially greater, but so too are the threats the parks face. Today's threats to the parks are difficult to mitigate because they are extraordinarily complex.

Research is important in the national parks for three broad purposes:

* To determine what resources are present in order to protect them, manage them, and detect changes in them.

exotic species, threats to park resources caused by air pollution or overcrowding, and threats to long-term ecosystem viability caused by the myriad stresses of the twentieth century all jeopardize this unique and invaluable system. Although an adequate science program alone cannot ensure the integrity of the national parks, it can enable faster identification of problems, greater understanding of causes and effects, and better insights about the prevention, mitiga-

We now know that balancing the call to protect resources and the call to provide citizens with opportunities to enjoy the parks is a constant challenge.

Yosemite affords scientific researchers a great number of animal subjects including bats, hermit thrushes, carved gophers, and the American dipper.

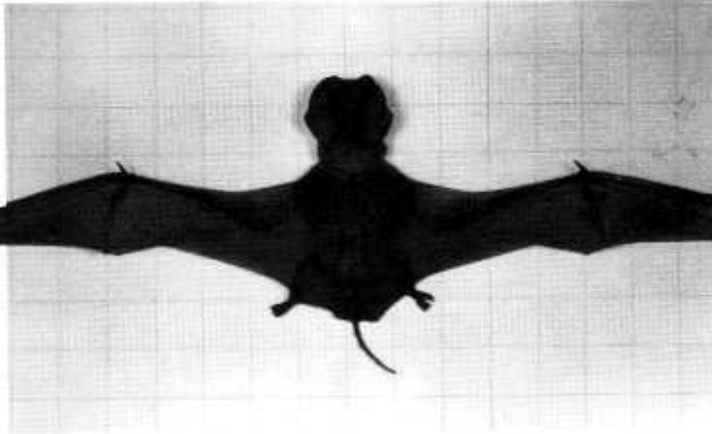
* To understand the natural dynamics and processes of populations, ecosystems, and other park resources

* To assess the effects of specific threats and to devise and evaluate management responses

Previous Reviews of the NPS Research Program

Since the early 1960s, when the first major independent reviews of the adequacy of the NPS science program were conducted, many experts have assessed the Park Service's research efforts. Two particularly noteworthy reviews appeared in 1963: "Wildlife Management in the National Parks," known as the Leopold report after A. Starker Leopold, who chaired the special committee, and "A Report by the Advisory Committee to the National Park Service on Research," commonly called the Robbins report after William J. Robbins, the chair of that National Research Council committee. Both reports recommend strengthening the science program. The Robbins report noted:

Research by the National Park Service has lacked continuity, coordination, and depth. It has been marked by expediency rather than long-term considerations. It has in general lacked direction, has been fragmented between divisions and branches, has been applied piecemeal, has suffered because of a failure to recognize the distinctions between research and administrative decision-making, and has failed to ensure the implementation of the results of research in operational management. . . . It is inconceivable that property so unique and valuable as the national parks, used by such a large number of people, and regarded internationally as one of the finest examples of our national spirit, should not be provided adequately with competent research



NPS PHOTOS



scientists...as elementary insurance for the preservation and best use of the parks.

There was little significant progress in response to the recommendations of these reports. Two major problems continued to plague the NPS science program at the beginning of the 1970s: inadequate funds to support a continuing program, and disagreement about who should direct the work of scientists. In 1977, another review of the NPS natural science program was published. Known as the Allen and Leopold report, after co-chairs Durward Allen and Starker Leopold, it clearly called for the NPS to give science and research much greater responsibility in policy making, planning, and operations. It found no fault with the general direc-

tion of the science program, only with its lack of funding, staffing, and influence.

Again, however, little action to implement the report's recommendations ensued. Private groups such as the National Parks and Conservation Association and The Conservation Foundation published other reports critical of the Park Service, focusing wide public attention on the threats to the national park system. Under congressional pressure, the NPS conducted a comprehensive assessment of park threats in 1980. That report documented widespread and serious problems in the parks and recommended four actions to better protect park resources: conduct a comprehensive inventory of park resources; establish accurate baseline data and con-

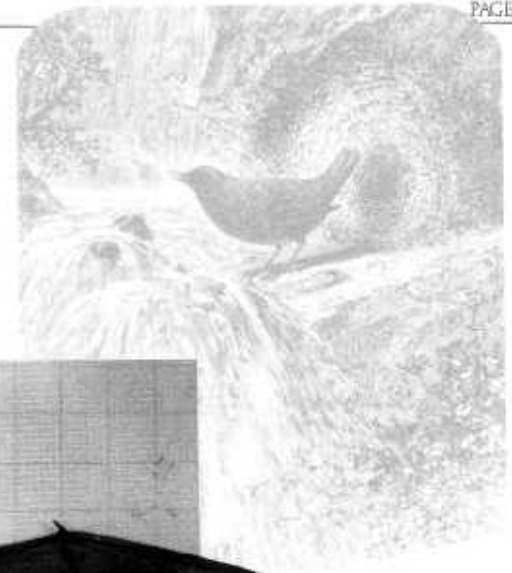
duct monitoring to detect changes in resources and ecosystems; focus attention on threats associated with adjacent lands; and improve the ability of park managers to quantify and document the effects of various threats. In essence, the NPS identified the same problems and recommended the same solutions as had previous independent review committees.

In 1989, yet another report, "National Parks: From Vignettes to a Global View," also known as the Gordon report, criticized the degree to which the NPS has fulfilled its obligations in research and in management of natural and cultural resources. This report recommended that the NPS adopt a "new vision" to meet the environmental challenges of the twenty-first century, "a vision based on the principles of ecosystem management [and] on sound research."

In all, a dozen major reviews of NPS science and management over a period of 30 years provided specific recommendations for strengthening science in support of better management of the national parks. Many of the suggested improvements were recommended time and time again. But very few of the recurring recommendations have been effectively or consistently implemented.

The Current Research Program

According to the NPS, the primary objective of the current science program is to conduct directed research studies that provide information in support



As the trustee for irreplaceable samples of the nation's natural and cultural heritage, the NPS should be among the most forward looking and progressive resource management agencies in the federal government.

Research in the national parks extends to areas that are cultural, including archeology, ethnography and ethnology.

of park planning, development, management, and visitor education and enjoyment. Because the resources that are studied run the gamut from biological (e.g., vegetation, wildlife, fisheries) to geophysical (e.g., water, air, caves, soils, islands, minerals) to cultural (e.g., archaeological ruins, monuments) to aesthetic (e.g., scenic vistas, quiet places), the NPS science program must include elements of the biological, geophysical, and social sciences.

The current NPS organization considers research part of resource management. Because there is no separate research authority, all scientific studies are funded as part of management. These two distinct but closely related activities were combined to encourage cooperation, although critics argue that the approach is less effective than intended because it reduces the importance of the two separate and vital activities.

Park Service research and resource management activities are organized at three levels of authority: in the Washington office (WASO), in the 10 regional offices, and in the individual park units. The Washington office develops general policies and standards, sets national priorities, and coordinates servicewide research programs. Most research is planned by and conducted under the direction of the 10 regional offices. As a result, there is not one science program in the NPS, but 10 separate programs, each different in form, function, and effectiveness. All are ultimately funded by management and dependent on the emphasis committed by senior managers in the regions and parks.

The Park Service maintains a smaller research staff than is found in other federal land management agencies — typically around 2 to 3 percent of its staff.



BRIGID SULLIVAN

By contrast, 8 to 10 percent of the staff of the U.S. Fish and Wildlife Service are research personnel. The organization of responsibilities varies significantly from region to region within the NPS. In some cases, members of the resource management staff, including any scientific staff, report to the superintendent of a park. In other cases, scientific staff members at parks and in cooperative



NPS PHOTO

study units report to regional chief scientists, while resource management specialists report to the superintendent. Some regions arrange for much of their research through extramural contracts or cooperative agreements; in others, most research is done by NPS staff.

The question of whether the leadership of the NPS science program should be centralized or decentralized is controversial. The decentralized, regional approach to the science program was instituted in the early 1970s to make research more responsive to park needs. But the decentralized approach sometimes is inefficient and results in fragmentation of effort. It creates great variations in research quality and effectiveness and in scientists' morale from region to region and from park to park. Also, where research and resource management are funded from the same part of the budget, the two activities end up competing for support. Given the shortage of staff and funds throughout the NPS, conflicts between researchers and managers — with their different goals and methods — can be severe and counterproductive.

The absence of a distinct science program hampers research

planning, tracking of expenditures, and accountability for results. The lack of formal structure and clear leadership in the NPS science program also hampers attempts to assess it. The decentralized approach brings many different operational models and reporting structures and makes any kind of an audit of scientists, funding, and other characteristics extremely difficult. It is not possible, for instance, to determine accurately the amount of money allocated to NPS research, because research and resource management are funded under the same budget activity — natural resource management. In addition, it is not always possible to separate resource management from law enforcement and various other activities undertaken by park rangers. In fiscal year (FY) 1992, about \$92.7 million was allocated for natural resource management. The NPS estimates that research funding grew from about \$18.5 million in FY 1987 to about \$29 million in FY 1992, but it is not possible to confirm this estimate. At the same time, NPS identified \$250 million to \$300 million in needed but unfunded natural resource projects.

Questions about the effectiveness of science to support park management — and especially questions about organizational structure and funding levels — have been raised throughout the history of the NPS science program. Park personnel, advocacy groups, and independent advisory groups have repeatedly concluded that the science activities are not meeting management needs. If it is so easy to identify the deficiencies in the program, why is

Authority, Autonomy and Credibility

An Explicit Legislative Mandate

* To eliminate once and for all any ambiguity in the scientific responsibilities of the Park Service, legislation should be enacted to establish the explicit authority, mission, and objectives of a national park science program.

* The National Park Service should establish a strong, coherent research program, including elements to characterize and gain understanding of park resources and to aid in the development of effective management practices. To provide a scientific basis for protecting and managing the resources entrusted to it, the Park Service should establish, and expand where it already exists, a basic resource information system, and it should establish inventories and monitoring in designated park units. This information should be obtained and stored in ways that are comparable between park units, thereby facilitating access, exchange, integration, and analysis throughout the park system and with other interested research institutions. The NPS should support and develop intensive long-term, ecosystem-level research projects patterned after (and possibly integrated with) the National Science Foundation's Long-Term Ecological Research program and related activities of other federal agencies. The ways resources are used and appreciated by people should be documented. In addition, National Park Service researchers should have more



input into the development of resource management plans. Effective interaction between research results and resource management plans cannot take place without both a strong science program and a strong resource management program.

* The National Park Service should also establish and encourage a strong "parks for science" program that addresses major scientific research questions, particularly within those parks that encompass large undisturbed natural areas and wilderness. This effort should include NPS scientists and other scientists in independent and cooperative activities. The goal is to facilitate the use of parks for appropriate scientific inquiry on major natural and related social science questions.

Separate Funding and Autonomy

* The National Park Service should revise its organizational

structure to elevate and give substantial organizational and budgetary autonomy to the science program, which should include both the planning of research and the resources required to conduct a comprehensive program of natural and social science research. The program should be led by a person with a commitment to its objectives and a thorough understanding of the scientific process and research procedures.

* The National Park Service science program should receive its funds through an explicit, separate (line item) budget. A strategic increase in funding is needed, especially to create and support the needed long-term inventories and the monitoring of park resources.

Building Credibility and Quality

* To provide leadership and direction, the NPS should elevate and reinvigorate the posi-

tion of chief scientist, who must be a person of high stature in the scientific community and have as his or her sole responsibilities advocacy for and administration of the science program. The chief scientist would work from the Washington office and report to the Director of the NPS, provide technical direction to the science and resource management staff at the regions and in the parks, and foster interactions with other research agencies and non-government organizations. In addition, the chief scientist should establish a credible program of peer review for NPS science, reaching from the development of research plans through publication of results.

view for NPS science, reaching from the development of research plans through publication of results.

* To help the NPS expand the science program and increase its effectiveness, the Park Service, in cooperation with other agencies, should establish a competitive grants program to encourage more external scientists to conduct research in the national parks. The program should include scientific peer review that involves both NPS scientists and external scientists.

* The National Park Service should enlist the services of a high-level science advisory board to provide long-term guidance in planning, evaluating, and setting policy for the science program. This independent advisory board should report to the director, and its reports should be available to the public.

And it is a waste of a unique resource if the parks are not used, with proper safeguards, to help address the scientific challenges faced throughout the biosphere.

Research allows park managers to better contend with resource management issues like tree diseases, disruption of the fishery, and human interactions with the deer population.



NPS PHOTOS



it so difficult to change or restructure it? The NPS science program is unnecessarily fragmented and lacks a coherent sense of direction, purpose, and unity. As the trustee for irreplaceable samples of the nation's natural and cultural heritage, the NPS should be among the most forward looking and progressive resource management agencies in the federal government, and research should be an essential element in its mandate.

Recommendations

In conducting this study of science in the national parks, the National Research Council's Committee on Improving the Science and Technology Programs of the National Park Service originally set out to evaluate the scope and organization of current NPS natural and social science by performing a peer review of NPS research activities. However, the committee soon determined that the crucial problems in the NPS research program are not at the level of individual projects. Instead, they are more fundamental, rooted in the culture of the NPS and in the structure and support it gives to research. Thus, the committee concluded that the real need was for an assessment more broadly focused on the research program and its place within the agency.

The call for change made in this report is not new. But given the lack of response to so many previous calls for change, how can the present report succeed in inspiring action? The members of the committee believe that increased funding or incremental changes alone will not suffice, and they call instead for a fundamental metamorphosis. It is time to move toward a new structure — indeed, toward a new culture — that stresses science in the national park system and guarantees long-term finan-

cial, intellectual, and administrative support. There are three key elements:

- * *There must be an explicit legislative mandate for a research mission of the National Park Service.*
- * *Separate funding and reporting autonomy should be assigned to the science program.*
- * *There must be efforts to enhance the credibility and quality control of the science program. This will require a chief scientist of appropriate stature to provide leadership, cooperation with external researchers, and the formation of an external science advisory board to provide continuing independent oversight.*

See previous page for complete list of recommendations.

Realizing the Vision

To build a science program that fulfills its potential — that meets the needs of resource managers, helps the public understand and enjoy park resources, and contributes to understanding our changing world — the Park Service must give the science program immediate and aggressive attention. Pressures on these national treasures are increasing rapidly. It is shortsighted to fail to organize and support a science program to protect the

parks for future generations. And it is a waste of a unique resource if the parks are not used, with proper safeguards, to help address the scientific challenges faced throughout the biosphere. The current Park Service leadership has expressed its recognition of the need for a reinvigorated science program, as well as the importance of the parks in a broader scientific context. It is time to translate that recognition into action.

The conduct of research is fundamentally different from that of most other NPS functions. It operates on a schedule not determined by the calendar of Congress, but on the calendar of the natural or cultural phenomena being studied. Products from research come with answers frequently surrounded with small or great uncertainty. The design of an experiment and the interpretation of the results often depend on the scientific process as it is conducted in another discipline or in a different part of the world. If the NPS is to meet the scientific and resource management challenges of the twenty-first century, a fundamental metamorphosis must occur within its core. This committee's vision for the NPS science program is ambitious but obtainable. The national parks are, after all, simply too valuable to neglect.

This article reprints the Executive Summary of the report of the Committee on Improving the Science and Technology Programs of the National Park Service prepared for the National Research Council, Washington, D.C., and released in September, 1992. The complete text of the report is titled Science and the National Parks and is available from the National Academy Press, 2101 Constitution Ave., N.W., Washington, DC 20418.

Successful Work Trips



This summer's Yosemite Association member volunteer work trips were effective and productive as usual. There were four different trips this year, three in Yosemite Valley and one in Tuolumne Meadows. The four Y.A. crews worked at various tasks including campfire ring removal, revegetation, and exotic plant eradication. Some participants have been part of the program since its inception, while others chose to work twice this summer.

The program has come to provide important help to the National Park Service each year. It is jointly sponsored by the Yosemite Institute, the Yosemite Park & Curry Co., and the Yosemite Association.

Members Alice and Richard Cocke, whose whole family worked for a week in Yosemite Valley, were so inspired by the experience that they produced the following work of verse. The primary task during their work trip was removal of the invasive and pervasive bull thistle, an exotic species.

Thistle Eradication

Alice and Richard Cocke

We hope that we will never see
Another thistle growing in
the lea
Prickly plants we know as
weeds
Their purple flowers producing
seeds
With Victor and Paul as our
leaders
We follow faithfully as weeders
With our clippers and loppers
in tow
We form our work line in a row
Clip, clip, lop, lop They work us
till we flop
People stop and wonder
What we're doing out yonder
With a smile on our face
And trying to keep the pace
We tell them, "It's a working va-
cation,
Doing thistle eradication!"

Research Grant Deadline December 1

Individuals seeking grant funding from the Yosemite Association for the 1993 calendar year must submit their proposals to YA by December 1, 1992. This year the Association's grants program provided about \$30,000 to a number of researchers for a variety of projects.

An information sheet and grant request form for the 1993 program are available from the Association at: PO Box 230, El Portal, CA 95318, or call Anne Steed at (209) 379-2646.

Henry Berrey Memorial Fund Grows

Since a fund in memory of Henry Berrey was established recently by the Yosemite Association at the request of the Berrey family, a number of gifts have been made by a variety of Henry's friends. The fund will be used to support projects at Yosemite National Park to continue the fine work that Henry accomplished during his many years as Manag-

ing Editor of our organization. Thanks to the generosity of contributors to date, such support promises to be substantial. A list of those contributors appears elsewhere in this journal.

Those friends of Henry Berrey, Yosemite Association members and others who have not yet donated to the memorial fund are encouraged to do so. Checks should be made payable to the Henry Berrey Memorial Fund and set to the Yosemite Association address.

209-379-2317

If you're planning a trip to Yosemite and have questions, give our Members' phone line a call between the hours of 9:00 am and 4:30 pm Monday through Friday. We don't make reservations, but we can give the appropriate phone numbers and usually lots of helpful advice.

Association Dates

December 1, 1992: Deadline for 1993 Grant Applications.

March 27, 1993: Spring Forum, Yosemite Valley.

September 11, 1993: Annual Member's Meeting in Tuolumne Meadows.



JOHN BRENNAN

Membership

Continued from page 19

Russ & Julie Meyer, Paul & Patrice Murk, Linda Myers, Willard Neumann, Kathryn & Gregory Nimz, George O'Dell, Colm J O'Hara, Armand Palomar, Mrs Kendy Parent, Virginia C Poirer, Mr & Mrs Mark Schaeffer, S Sokol, Frances Sparky Sotcher, Frances L Sowers, Charles Stephens, Don Stratton, Jan Thomson, John Truxaw, Gary & Gloria Winton, David J Wright

Life Members

William M Lande MD, Carol Sisco & Marge Voith

Participating Life Members

C M Cooper & T J Lawyer, P Hanemann, Edward & Loralee Hiramoto

International Members

Maria Celia Castro Amaral, Brazil; Clive & Barbara Curson, South Africa; Axel C Peters, Germany; Keiko Seki, Japan; Andrew Edward Richard Waddington, England

Recent Donations to YA

Charles & Sharon Aberle, Janet Burton, Martha & John Burton, James Eaton, Friends of Ostrander, Joel Johnson, Grant C Idle & Michelle D Almquist, Joann Maile, James Schwabacher Jr, Henry Steinbach, Transametica Foundation, United Jewish Federation of San Diego County, Wilderness Press

In memory of Alice Atwood: Lois B Mueller

In memory of Henry Berrey: Robert & Phoebe Dohrmann, Frederick Harper DDS, Karl & Sylvia Hoffmayer, James Huning, L W Lane Jr, Frank Mcquoid Jr, Steve & Jane Medley, John Metcalf, Mary Janis Robinson, Jane Rust, Holly Warner & Joan Conlan, Robin Winslow-Smith & Family

In memory of Gerry Eickenhorst: Richard & Ruth Danielsen

In memory of Keith Fawcett: Walter & Adele Booth

In memory of Arthur J Freeman: Frances Freeman Dougherty

In memory of Aileen Leedom: Mr & Mrs M P Warren

In memory of Cora Mitchell: Arthur H Edwards

Adopt A Different Alternative

YA Board Comments on the Yosemite Valley Housing Plan

September 29, 1992

Superintendent Michael V. Finley
N.P.S.— Box 577
Yosemite N.P., CA 95389

Dear Superintendent Finley:

The following are the comments of the Yosemite Association (Y.A.) on the Draft Environmental Impact Statement for the Yosemite Valley Housing Plan. The Y.A. is a non-profit cooperating association operating in Yosemite under a special agreement with the National Park Service (NPS). Our various activities serve to extend the offerings of the Interpretive Division of the NPS. The net revenues we earn each year are used to benefit education, interpretive, research and environmental programs in Yosemite.

We use a number of different facilities in and near Yosemite to carry out our work. These include eight retail book stores from Tuolumne Meadows to Wawona, and our administrative office and warehouse in El Portal. During our busy season we have a staff of over 50 employees. The year-round office staff in El Portal numbers 10.

Y.A. is commenting on the housing plan for the following reasons:

1. Our concern for our employees and their housing and transportation needs;
2. Our interest in maintaining a strong working relationship with the NPS in the park;
3. Our desire to make Y.A.'s operation as efficient as possible; and
4. Our interest in and support for the research we are funding.

Experience in El Portal

The Yosemite Association moved its headquarters from Yosemite Valley to El Portal in 1986. The experience of our employees over the past 6 years has been that El Portal is a vi-

able and desirable location for both administrative headquarters and housing. Based on this recent experience, we believe that it is also a viable and desirable location for the NPS and the concessioner, and that it is a preferable site to Foresta.

Relocating headquarters and housing to Foresta would create additional inconvenience for Y.A. employees. It is even more remote than Yosemite Valley for transacting Y.A.'s necessary administrative business with the NPS and the concessioner. In fact, it presents additional transportation problems in winter time when snow makes access to Foresta quite difficult and hazardous. Housing Y.A. employees in Foresta is not desirable, either, for it would require commutes to either Yosemite Valley or El Portal where practically all our jobs are located. Foresta is simply inconvenient from a Y.A. operational standpoint.

As far as housing is concerned, moving operations to El Portal

opened greater residential opportunities for our staff. It would do so for the employees of other park entities.

Of the 10 year-round employees in our office, 8 now commute from Midpines, Mariposa, Oakhurst and elsewhere. Most of these employees have chosen to purchase homes since real estate is still affordable in Mariposa and Madera Counties. They appreciate that the commute to El Portal is considerably shorter than it is to Yosemite Valley or Foresta.

Given our experience, we believe that moving the NPS and concessioner administrative headquarters to El Portal would result in a large portion of affected employees opting for private housing in foothill communities. This would reduce the need for housing development and alleviate concerns about lack of buildable space in El Portal.

As far as transportation is concerned, El Portal has advantages as well. Recently a new

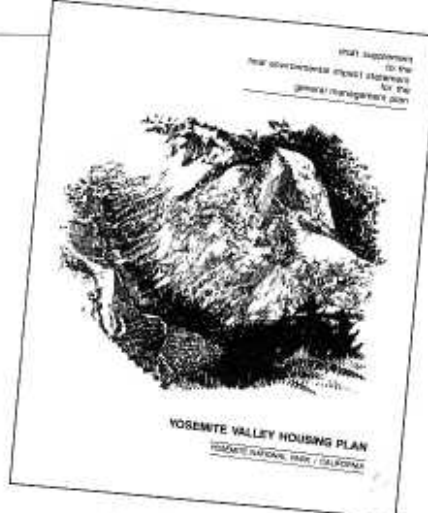
employee commute bus has begun running between the foothill communities and El Portal (plus Yosemite Valley). By placing all headquarters offices and administrative employees in El Portal, the viability of the mass transit alternative would be enhanced, making the choice of living outside the park even more attractive.

Our experience has been that management of our operations in other parts of Yosemite from El Portal, while less convenient, is entirely feasible and acceptably functional. We have developed systems for minimizing disruption to our business caused from being at a distance. In fact, many of the trips made by our employees to Yosemite are to conduct meetings and to discuss administrative matters with representatives from other entities located in the park. Those trips could be dispensed with if all parties were in El Portal.

Big Meadow, Foresta.



BRIAN CROGAN / YOSEMITE PHOTOGRAPHIC SURVEY



While trips into Yosemite will be inevitable, the greatest bulk of both NPS and concessioner business could be transacted in El Portal with no change in operational efficiency. We believe that locating the headquarters of all key Yosemite entities (NPS, concessioner, Yosemite Institute, etc.) in El Portal would promote better working relations and foster more harmony in the community.

Further, El Portal is a logical service center for Yosemite. It is well situated for access to the park as well as neighboring communities. There is an existing infrastructure including schools, stores, water and sewer, etc., which could be expanded much less expensively than building completely new support facilities and social services in another location. We believe that in-filling El Portal as administrative headquarters would be more efficient than scattering offices and housing throughout

the park or developing an entire new site, with the environmental effects that would have.

Impact on Great Gray Owl

During 1986, the Yosemite Association solicited a gift from the Chevron Corporation in support of research regarding the great gray owl in Yosemite. Over \$100,000 from Chevron were expended by Y.A. and the foundation it created (the Yosemite Fund) to aid the work of four different researchers working under the direction of Charles Van Riper, principal investigator.

Among other findings, their research showed that Yosemite is one of the few remaining sites in California where the great gray owl (listed as an endangered species by the State of California) occurs, and that the owl is sensitive to human presence. It also indicated that Big Meadow plays an important

role for the owls:
 1) the great gray uses the meadow in winter;
 2) the great gray uses the meadow as a transition area in spring and fall;
 3) nesting owls will use the meadow for hunting when there is snow at higher elevations; and
 4) though unsubstantiated, there is some evidence that young male owls use the meadow when they are displaced by mature males during nesting season.

The housing plan EIS suggests that there is much uncertainty about the indirect impacts that the proposed development will cause to the great gray owl. Among the dangers listed are:

- a. possible nesting failure at Crane Flat;
- b. lower survival rate and

reproductive success of owls in Foresta area;

- c. abandonment of Big Meadow and McCauley Ranch Meadow;
- d. permanent loss of reproductive potential of Crane Flat pair;
- e. reduction of Yosemite habitat base when habitat base in state has already been greatly reduced as a whole;
- f. loss of viability of Yosemite population; and
- g. acceleration of decline in the owl's endangered population.

The Yosemite Association believes that the loss of species in Yosemite and California must be avoided. Our organization has invested in research aimed at identifying factors to prevent further population decline. Actual impacts can't be proven until those impacts are made, but we fear that the potential dangers to the great gray owl from the proposed action are too great to justify the risk.

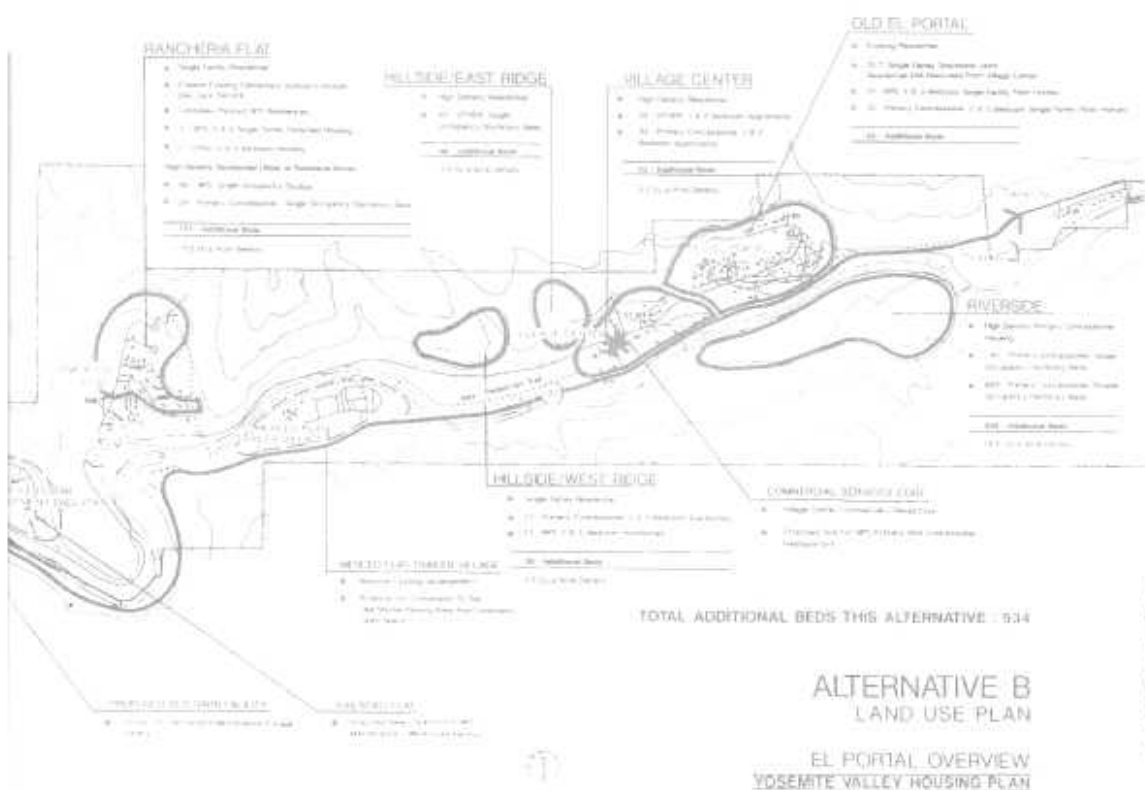
We encourage the National Park Service to reconsider its proposed alternative and choose another option that does not threaten the great gray owl.

Recommendation

The Yosemite Association recommends that instead of the proposed action, an alternative that uses El Portal as the site for housing and administration be adopted.

On behalf of the Board of Trustees of the Yosemite Association, I thank you for the opportunity to comment on the housing plan.

Sincerely,
Lennie Roberts, Chair



Yosemite

CATALOG

06800 *The Yosemite Calendar - 1993* with photographs by William Neill. This is the first time that the Yosemite Association has printed its own wall calendar, and we're very pleased with our initial offering. Gifted Yosemite photographer, William Neill, has assembled 14 of his best images which are reproduced beautifully in full color. They are matched with excerpts from poetry by writers like Gary Snyder, Robert Frost, Rainer Maria Rilke and Joe Bruchac. Each month includes significant dates in Yosemite history, holidays and moon phases. It's all printed in a 12" x 12" size on handsome recycled paper and wire-o bound. We think you'll agree it's elegant and attractive. Yosemite Association, 1992.

\$9.95.

17276 *Weather, 17270 Birds, 17272 Flowers - Eyewitness Explorer Books* by various authors. This new series of colorful and beautifully designed books is intended for use in the field by young readers. Each of the three titles is packed with projects and lively stories to help develop an understanding of the natural world. Among the activities included are building a bird nest, making a plant maze, and mea-

suring rainfall. Eyewitness Explorers are smaller in format than the regular Eyewitness books (about 6" x 8"), but they're stuffed with information and illustrative material. Printed in full color, each hard-covered book is 60 pages long. Dorling Kindersley, Inc., 1992.

Hardcover, \$9.95 each.

15120 *Become a Bird and Fly!* by Michael Elsohn Ross; illustrated by Peter Parnall. Here's the latest

work by Yosemite-based children's author, Michael Ross. Y.A. members should be familiar with Michael's work — he's published five titles with our Association. This book is the story of a boy named Nicky who wishes he could fly. With

the help of his neighbor Avis, he becomes a bird and takes to the air. As Nicky transmogrifies, the reader comes to appreciate what distinguishes humans from birds, and what special adaptations have allowed birds to fly. It's a captivating tale, wonderfully illustrated by the nationally prominent Parnall. The book is printed in color in a library version, and is 10" wide and 8" tall. Millbrook Press, 1992.

Hardcover, \$15.95.

16208 *Climbing Back* by Mark Wellman and John Flinn. This is the story of paraplegic climber Mark Wellman who scaled Yosemite's two great landmarks, Half Dome and El Capitan, with Mike Corbett. Wellman's struggles to survive a disabling accident, to become a park ranger and an accomplished wheelchair athlete, and ultimately to climb the sheer granite faces of Yosemite Valley's walls are chronicled in the lively text. Mark's dreams, his strong will and determination, and his bold approach to life have challenged all of us to continue to strive

toward loftier goals, and the book underscores the magnitude of his accomplishments.

Co-author John Flinn is a staff writer for the San Francisco Examiner. The book's 256 pages are illustrated with a section of black and white photographs. WRS Publishing, 1992.

Hardcover, \$19.95.

The story of Mark Wellman, Yosemite's incredible paraplegic climber, who climbed El Capitan and Half Dome.

CLIMBING BACK



by Mark Wellman and John Flinn

FOREWORD BY SENATOR ROBERT DOLE

BECOME A BIRD AND FLY!
by MICHAEL ELSOHN ROSS
ILLUSTRATED BY PETER PARNALL

The Yosemite Calendar
1993

15%
DISCOUNT
MEMBER



12525 *The Hummingbird Game* by Ampersand Press. You'll discover the world of hummingbirds with this entertaining game printed in full color. Players try to get 16 North American hummingbird species together with flowers, insects, and the correct range and habitat. The game includes a deck of 60 cards, score pad, hummingbird pencil, 4 pecking order card charts, hummingbird fact sheet and full instructions. It's for birdwatchers and all game lovers (ages 8 to adult) who like to have fun with the natural world. From 2 to 6 players. Ampersand Press, 1991.

\$14.95.

33300 *Teaching Kids to Love the Earth* by Herman, Passineau, Schimpf and Treuer. This new book is a collection of 186 activities designed for use by parents and teachers with children to help them experience and appreciate the earth. Each chapter contains a story, instructions for a main activity, suggestions for related activities, and a list of additional resources. The main themes are curiosity, exploration, discovery, sharing and passion. Illustrated with black and white drawings. 175 pages. Pfeifer-Hamilton Publications.

Paper, \$14.95.

34170 *The Visual Dictionary of Plants*.

This unusual work looks at plants of all kinds including flowering plants, conifers, ferns, mosses, cacti, carnivorous plants, wetland plants, and more. It is designed as a guide to the naming of the various plant parts, and the most intricate of workings are revealed and labeled in full-color clarity. With over 200 outstanding original photographs and graphic illustrations, the book provides instant textual and visual access to a 3,000 word plant vocabulary. It's an exciting new idea in plant description, and a beautiful volume just to browse. Published in a large format (10" x 12"), and 64 pages long. Dorling Kindersley, Inc., 1992.

Hardcover, \$14.95.

14475 *Our National Parks* by Ansel Adams.

This new book presents legendary photographs of over forty national park and monuments in the United States,

along with a sampling of Adams' impassioned letters, speeches, and writings (all out of print or never before published). These insightful and controversial writings about critical issues facing the park system still ring true.

The photos span six decades and represent some of the best work of this ardent champion of the parks. 127 pages, black and white photos. Little, Brown, 1992.

Paper, \$16.95.

25300 *Native American Stories* told by Joseph Bruchac.

These 24 myths drawn from the native cultures of North America first appeared in *Keepers of the Earth* by Bruchac and Michael Caduto. Tribal groups represented include the Inuit, the Zuni, the Cherokee, the Dakota, the Abenaki, and many more. A common thread throughout the stories is the native view of the world as family — Earth as our Mother, Sun as our Father, and the Animals as our brothers and sisters. The myths communicate the special

mission of humans — to maintain the natural balance and to be keepers of the Earth. Illustrated with black and white line drawings by John Kahionhes Fadden. 145 pp., Fulcrum Publishing, 1991.

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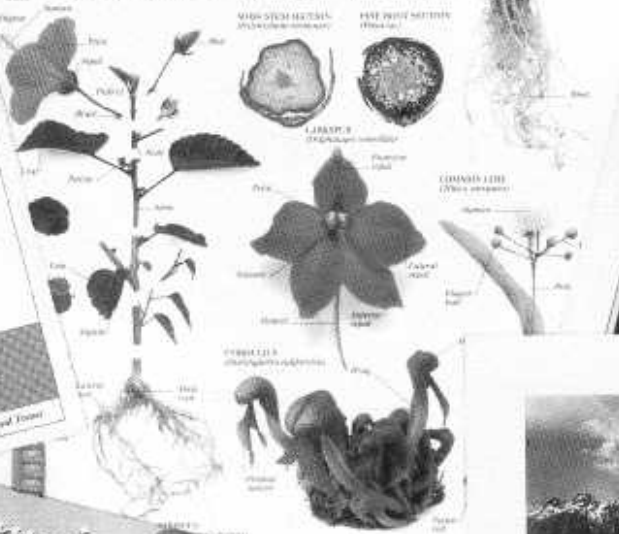
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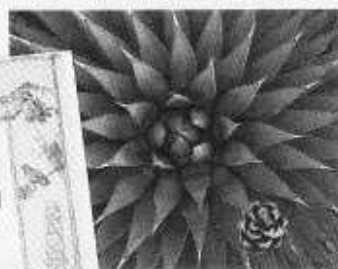
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New Members

We would like to welcome the Yosemite Association's following new members who became members within the past 12 months. Your support is greatly appreciated.

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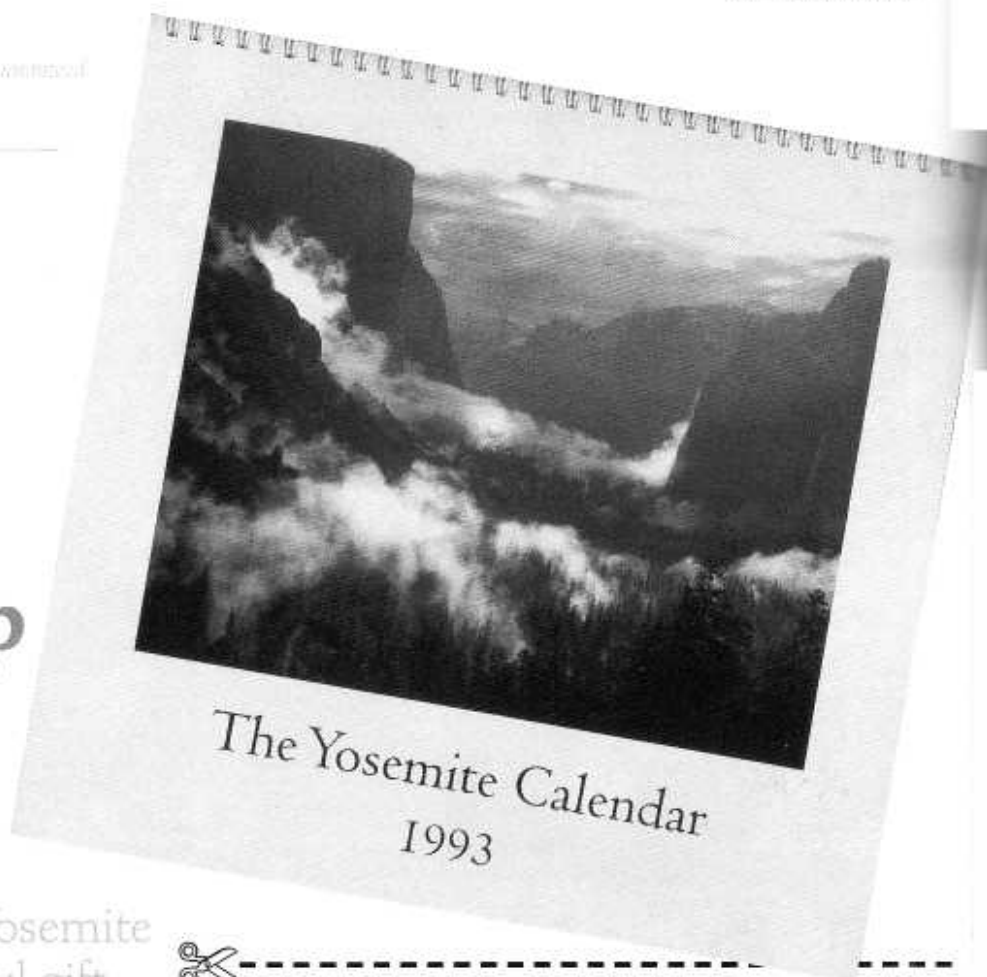
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