The recent publication of a controversial book entitled Playing God in Yellowstone by Alston Chase has focused national attention on the management of both the park and people in our nation's parks. Given this heightened interest in NPS management policy, we have chosen in this issue to highlight several management issues and problems in Yosemite — from prescribed burning to overcrowding.

The Yellowstone book presents a compelling case for questioning the park's wildlife policy, as well as calls into question the responsibility that the National Park Service must assume in managing Yellowstone. Yosemite, and all our national parks.

While Chase has focused on the worst aspects of the management program, many feel that whatever one's response to the book, it is unquestionably an important volume. Several national magazines including Newsweek have featured the work and explored deeply the state of our national parks. Alston Chase has raised doubts about NPS regulation of wildlife and other resources, and questioned whether Americans are willing to pay the price to save the parks.

In this issue we have included articles about prescribed burning, evergreen root rot, ozone pollution and overcrowding—all as they relate to Yosemite National Park. Whether these issues are as controversial as those facing Yellowstone, or just how well the National Park Service is coping with them, is for the reader and time to tell. We've also included a fascinating review of Playing God in Yellowstone to allow our members to better judge the book. The concept of "playing God" emphasizes the critical role and great responsibility that the National Park Service must assume in managing Yellowstone, Yosemite, and all our national parks.
A plant pathologist at UC Berkeley, Dr John R. Parmeter Jr, recently predicted the probable loss of most of the evergreens in Yosemite Valley from the effects of annosus root rot. The rot is a fungus known as *Fomes annosus* now renamed *Heterobasidion annosum* by the taxonomists. The prevention of Indian burning and the removal of the glacial moraine in the Valley by early settlers contributed to the spread of the root disease and the increase in density of the conifers. Further, man's past activities in trying to control bark beetles in order to protect the forest has intensified and spread the root rot over a larger area.

When the density of the trees became great enough from the lowering of the water table and the lack of killing fires, some trees were weakened through competition for food and adequate sunlight. These weakened trees were then susceptible to bark beetle attack and infection by disease.

In the early years Park Service policy was to protect nature from herself. This was done by killing the predator to save the prey—for example the mountain lion and the deer. Next, the deer was killed to let the vegetation recover from over-grazing when in fact the vegetation was becoming over-grown and inaccessible due to the lack of regeneration by fire.

Until the late 1960's trees attacked by bark beetles were cut down in an attempt to control the insects and to prevent their killing other trees. This cutting of the trees and the leaving of the stumps increased the unnatural spread of the disease even more than the lack of burning, which burning kills the fungus spores. The stumps left provided the native pathogens a huge food source and conjugal bed on which to feed and propagate. Throughout the mixed conifer forests each stump acted as a new source of infection causing an extension and intensification of this native disease. Because of the great amount of development in Yosemite Valley many more trees died or were weakened by man's activities than in the outlying forest and the bark beetles were able to eliminate more trees. As a result the number of stumps per acre is greater in the valley than elsewhere.

The increase in the density of the conifers over the last 100 years has resulted in the spread of an evergreen root rot, *Fomes annosus* (below). The disease killed this conifer that then fell on Yosemite Lodge.

After *Fomes* has infected a stump it spreads along the roots in all directions as a saprophyte until it contacts a root of a green tree where it acts as a parasite consuming the root. The spread is generally in a circular pattern contacting nearly every tree surrounding the stump. The infection center originating at the stump varies in size depending on the number of surrounding trees infected by the rot. At one lodge unit, 90 centers of varying size have, since 1970, coalesced into about six large centers.

The disease especially affects the large structural roots weakening the tree's ability to stand. At the same time the small absorption roots continue to feed the crown and the tree appears healthy. The full crown easily catches the wind and the tree readily blown over. Trees with natural lean may fall on a calm day. The tree failures are of no concern unless they happen in campgrounds, cabin areas, or other developed areas.

As Dr Parmeter indicated, a Yosemite Valley conifer will eventually succumb to the root disease, as the disease is expected to stay in the soil and the old roots for ten or more years. Maybe the oaks will return to the Valley may look like it did 100 years ago.

This sequence of events triggered by man's activities is an accelerated version of that found in nature resulting from too many trees, leading to a weakening of the trees, to insect and disease attack and to the eventual thinning if not the demise of the forest.

The fact that this cycle was triggered by man is not to say various managers erred, for they managed with their current knowledge and we have learned from them. We too are managing with the current knowledge and we may very well be causing problems for those who follow.

This pattern of events does show that whatever we do to nature today will be tied to what happens in nature tomorrow.

Lorne West is Park Forester for the National Park Service in Yosemite National Park.
The Ozone Threat to Park Forests

Ozone pollution poses a significant threat to the trees of Yosemite National Park say park researchers. While the extent of the forest involvement has yet to be determined, bio-monitoring plots established in the park have revealed levels of ozone that are cause for concern.

These and other findings were made public recently at a conference on air pollution effects on the state's forests sponsored by the State University and the California Air Resources Board. Commenting on the ozone issue, Sierran national parks was James Bennett, Director of the National Park Service's biological research program in Colorado.

Both Yosemite and Sequoia national parks have experienced considerably more ozone damage over the past five years with the number of affected trees doubling in number. Despite this increase, Bennett characterizes the amount of damage as "slight to moderate."

Research plots were situated in locations in Yosemite where researchers anticipated they would find ozone damage. Within these plots, 58 percent of pine and oak trees were affected to the extent that their foliage manifested chlorotic mottling. On the other hand, only 5 percent of the total foliage was actually damaged.

Permanent bio-monitoring plots will now be set up by NPS representatives to analyze the general condition of trees throughout the park.

How significant the damage and the ozone problem may be is still unknown, but the issue is a troubling one. "If pollution continues to increase, we will see more injured trees and more tree mortality," Bennett said.

Even more troubling to NPS resource managers are the prospects of dealing with airborne pollution. The ozone primarily originates outside the park and comes from automobiles and oil-fired industrial power plants, to the greatest extent. Unlike many other resource problems, air pollution does not have a controllable source within the park. Because so many external variables are at play, park managers cannot isolate and manipulate natural factors and processes even if they might like to. This is truly a regional threat, which may soon rise to the stature of a national problem.

And while Yosemite's pine needles yellow and drop off and the crowns of the park's trees thin, researchers work to determine the severity of the problem and how to deal with it. James Bennett remarked, "The symptoms we see are reversible. Fortunately, we are not at a point of no return yet." For the sake of the forests of Yosemite and the Sierra Nevada, we can only hope that such a point is never reached.

The fair skies of Yosemite Valley contain considerably more ozone pollution than five years ago. The mixed conifer forests are now at risk from airborne pollution.
To Burn or Not to Burn!

The recent controversy over the charring of giant sequoia bark has resulted in the suspension of all prescribed burning in Yosemite, and in Sequoia and Kings Canyon National Parks. The criticism originated from Eric Barnes, a landscape architect-planner from Sebastopol who formerly worked in Sequoia-Kings. He has charged the Park Service with reckless disregard for preserving the beauty of the Big Trees, and mismanagement of natural resources. Mr. Barnes did not challenge the scientific basis for restoring fire to the groves, but rather objected to the intensity of fire in prescribed burns that caused blackening of sequoia trunks sometimes up to 40 or 50 feet. He also criticized the death of several sequoias in the Giant Forest that fell after being burned out at the base.

In Mr. Barnes’ view, the scenic beauty of the red bark must be preserved even at the cost of compromising the natural ecological role of fire in sustaining the groves. He also maintains that large sequoias should not be allowed to burn down, even if they are predisposed to do so by large center fire scars that leave the trees standing on buttresses. The Park Service has argued that measures currently employed to protect sequoias are adequate, and that moderately intense fires are necessary to sustain natural regeneration of giant sequoias. Yosemite has emphasized conservative burning strategies in sequoia groves, and no large sequoia tree has been toppled or otherwise killed by prescribed fire. In Yosemite most fire scars on sequoias are extinguished, firelines are constructed to exclude major trees from the burn, or water is used to reduce bark char. Famous trees such as the Grizzly Giant, Clothespin, Telescope, and California Tunnel are not allowed to ignite. Occasional charring of bark is considered a natural inevitability of moderately intense fire. The prevalence of large fire scars on most sequoias is evidence that this situation has persisted for many centuries, and possibly throughout the existence of the groves. The most spectacular and successful regeneration of sequoia always occurs at “hot spots” where large accumulations of debris are consumed, resulting in ideal seed beds. Scorching and bark char are usually associated with such events.

In order to try to obtain an objective independent review of Mr. Barnes’ charges, the Western Regional Office of the Park Service formed a review panel of outside experts from various academic disciplines, including botany, landscape architecture, and fire ecology. This panel has been gathering information and hearing testimony since last winter, and plans to issue a final report in November. The panel was specifically asked to look into the scientific basis of the program as well as burning prescriptions and methods used in sequoia groves.

The Western Regional Director ordered all prescribed burns cancelled until the report is issued and evaluated by Western Regional Office. This directive applied to all burns, including those outside sequoia groves, even though Mr. Barnes has not criticized this aspect of the program.

The burning moratorium means that four burns in the Mariposa Grove must be cancelled this fall. These burns were to be planned and carried out with funding from a special congressional authorization for prescribed burning and restoration in the Grove. These funds had been authorized after a special lobbying effort by the National Audubon Society.

Natural lightning fires are being allowed to burn in designated zones despite the moratorium on prescribed burning. The summer lightning fires have burned into the Muir and Garfield groves in Sequoia National Park and are producing fire behavior and effects similar to those obtained under the prescribed burning program.

The controversy over the sequoia burning will probably end with the review panel’s report. Mr. Barnes and others have suggested seeking a legal injunction against the burning until a special Presidential review commission can review their charges and Park Service policy on prescribed burning. Objections have also been raised to possible irregularities and violations of environmental impact review processes mandated by the National Environmental Policy Act. Other organizations, such as the Sierra Club, have suggested counter suits to force a continuation of prescribed burning in the groves on the basis of ecological necessity.
The Crunch that Never Came

Ed Hardy

Each spring, as sure as the dogwood blossoms or robins return, news articles reappear with the same worn out message, “summer is here and so are much larger crowds for Yosemite.”

Predictions of an “overcrowded Yosemite” have become an annual rite of spring. This year, press attention was heightened because of the common beliefs that: people, frightened by terrorist acts, would reroute their European vacations closer to home; lower gas prices would cause dramatic upturns in domestic travel; and changing monetary conditions would encourage more overseas travelers to visit America.

While these factors did increase travel within the United States, they did not significantly affect summer travel to Yosemite. Yosemite Park and Curry Co. consistently said this to the media, but the message didn’t always get through.

Summer visitation to Yosemite National Park has peaked. It did so several years ago. It will never again grow by large percentages. Any growth that occurs will come in increased visitation during Fall, Winter or Spring, when visitation is lightest. The National Park Service has instituted controls to assure that overcrowding never again occurs.

We didn’t expect nor did we have a busier summer than last year. Here’s why:

1. Existing accommodations and camp sites in and around the Park have been nearly full in summer for several years, so there’s little room for increased attendance.

2. The number of rooms and camp sites in Yosemite National Park have not increased for several years and will not. On the contrary, the General Management Plan calls for long-term reduction of accommodations in the Valley by up to 17 percent.

3. Rooms and camp sites outside the park have increased only slightly (off-season demand for accommodations outside the Park is almost non-existent, discouraging largescale construction of additional lodges).

4. Day visitation is unlikely to grow by much, because Yosemite is too remote from large residential areas.

5. Travelers who were planning to take a long-distance trip to Europe were likely to reroute their travel to another long-distance location, not to one close to home.

6. International travelers tend to travel through organized tours and all such tours visiting Yosemite had already reached their maximum levels of available rooms.

7. The National Park Service traffic control plan limits automobile access to the eastern end of Yosemite Valley, when more than 4,600 cars enter the Park and should automobile congestion be evident in the Valley (so far, this plan has never been needed to be implemented).

Despite these points, several news media chose to predict excessive crowding for Yosemite this summer. Many failed to hear our and the Park’s prediction of summer attendance equal to 1985; they reported that it would jump 20 percent. It didn’t happen. In contrast, hotel occupancy was about even with last year and 1% fewer cars entered the Park. If any increase occurs, it will come in Fall and early winter, when visitation is lightest.

It has been frustrating to see how some reporters made news, rather than reporting it. One television network team utilized a telephoto lens to create the impression that hordes of visitors were jamming the walk to lower Yosemite Falls. They taped their story on a May Saturday, when visitation to the falls is highest but when much of the rest of the Park is uncrowded, creating the imbalanced impression that Yosemite is as busy every day. Newspaper headlines have also fed the misperceptions, by predicting crowding and congestion.

Certainly, Yosemite is a popular place and visitation to the Park has grown each year, but the image of crowding in Yosemite as running amuck is mistaken.

Informal surveys tell us that much of the public erroneously believes Yosemite is jammed every day. We hear that people think they can no longer drive into the park. Many tell us that Yosemite is open only in summer... all misperceptions resulting from what they remember reading, seeing or hearing.

Public misperceptions and misinterpretations are common. Wrong impressions are magnified, when the whole story isn’t told.

Ed Hardy is President of the Yosemite Park & Curry Co. and a member of the board of The Yosemite Association.
Editor's Note: The publication of Alston Chase's "Playing God in Yellowstone" was met with a strong reaction from both advocates and detractors. The key premise of the book based on five years of research is that the National Park Service's active regulation of wildlife in Yellowstone has proven to be a poor program. A secondary theme is that the parks are suffering from their own popularity.

Chase was quickly criticized by National Park Service representatives both at Yellowstone and elsewhere. Citing selective use of facts, park employees worked hard to discredit the author and his book. On the other hand, glowing reviews and related articles appeared in national publications, and Chase became a hot commodity on talk shows and radio call-in programs.

In an effort to put the book in perspective, the editors of the National Park Service Courier, the agency's in-house publication, asked Richard Bartlett, a professor of history at Florida State University, to write an objective review of the volume from an historian's viewpoint. We are pleased that Professor Bartlett has agreed to allow us to reprint the review (in a shortened version) for the benefit of our readers.

Anytime a man spends three years devoted fully to researching and writing a book, that book bears the right to be read. When he has been closely associated with his topic, has resided in or close by the subject for even more years, then what he says should command due respect. Such is the case with Alston Chase's book. He is a very angry man. He is determined to make his points, which he does with selected statistics and pertinent quotations from the dozens of involved contemporaries he interviewed. Like it or not, this is an important book. It should be read by all Park Service personnel. In places the reaction will be to curse, at other points, to nod in agreement, and — I guarantee this — in a few places to stand up and yell "Hurrah! Somebody finally had the courage to say what needed to be said." Keep in mind, however, that this book is polemic; it is not a complete analysis. It is not a history.

Chase's journalistic style is disarming. He uses the shock technique to entice the reader on, and he succeeds very well. The author is extremely convincing, at least to the uninformed. Because the book is a case for the prosecution, however, those readers with expertise on any segment of the subject will be caught up short and say, "Now, wait a minute ...." The perceptive critic also will note places where the writer seems to go on and on and on, and one suspects that the author indeed does possess the abilities of the literature professor who can read a 20,000 word short story and write a 10,000 word critique about it. Finally, careful analysis of the author's secondary sources (published books and articles) reveals something less than the thorough perusal of such information one would expect for a work of this kind.

Finally, when the reader has completed this book, I suggest that he (or she) skim through it again. Suddenly the realization dawns that all the parts do not add up to a complete whole. Something is missing. And that something I submit, is suggestions for improvement. Mr. Chase is heavy on criticism but very light on helpful suggestions. Does a bureaucracy exist that can withstand microscopic inspection? Probably not. Since the Second World War, the National Park Service has been buffeted by just about every wind of change that has blown across the continent. Political parties in power have changed, but always budgetary matters have prevented the full implementation of policy. Visitors swarmed into the parks after the War as never before. All of a sudden everything had to be done. Concessionaires with their lucrative franchises — Mr. Chase is wrong when he states that their businesses are of "marginal profitability" (p. 205) — used political clout to have their way. Too many new parks, monuments, and housekeeping chores were laid at the Park Service door. And environmentalists entered the scene with new suggestions as how the parks should be maintained. Changes in Interior Secretaries, Park Service Directors, and Superintendents have been all too frequent. And yet with all this the Service has done a stupendous job, and it deserves a lot of praise for its accomplishments.

But of course, Mr. Chase is concerned with its failures. Some of them cannot be denied. Can anything be done? As I have said, Mr. Chase offers very few suggestions.

What about this? In some universities when an experiment is proposed and volunteers are requested, the description includes a statement something like this: "The administration acknowledges the questionable success of this proposal and hereby grants the participants the right to fail."

In the cutting-edge world of environmental science, would not such a policy help the Service? The massive ego could be assuaged; the political repercussions could be reduced. Then instead of advancing like a juggernaut, suppressing criticism, forbidding outside research, possibly causing irretrievable damage, the Service could occasionally admit an error.

Perhaps this would help eliminate the territorial prerogative, the "fortress mentality," as Mr. Chase describes it, that permeates Yellowstone. And it is there. As an outside historian, I have felt a statement something like this: "This book is criticism, it is catharsis. It should be read carefully. Above all, it accuse's the Park Service as we have just seen it focused on NASA, let us hope the National Park Service will have listened to its critics.
Passports Now Recommended (But Not Required) at National Parks

Earlier this year a new booklet and commemorative stamp set called Passport to Your National Parks was developed and placed for sale in all National Park Service units by the respective parks' cooperating associations. The 104-page passport booklet provides maps, color photos and information on the 387 national park units in the United States. It briefly describes what travelers will find at each park and provides space to affix a series of commemorative stamps. Within the Passport is a section for visitors to get their book "canceled" whenever they visit a national park. These rubber stamped ink markings record the park's name and date of visit. Cancellations can be collected through 1990, and are free of charge at each park visitor center.

Each year through 1990 a "national stamp" will be issued. The national stamp for 1986 depicts the Statue of Liberty National Monument which this year celebrates its centennial. In addition, separate stamps will be issued each year for each of nine geographic regions within the U.S. Each annual regional stamp will depict a park within that region. The 1986 Western Region stamp honors Yosemite National Park.

The 1986 Western Region stamp honors Yosemite National Park. According to National Park Service Director William Penn Mott, Jr., "The Passport is designed to introduce Americans to the wonderful diversity of their National Park System. It will provide a colorful memento of a park vacation and help people become aware of their public lands." Director Mott added that the Passport will also encourage people to visit the Park System's lesser-known areas and thus spread out the increasing numbers of visitors who each year go to the parks. The collection of stamps and cancellations provides family fun and yet another reason to visit more parks in the system.

The price for a Passport book is $2.95. The 1986 national stamp is $1.00 and the 1986 regional stamps are 50c. The passport book and national stamps may be purchased by visitors at any national park (in Yosemite at the Valley Visitor Center); regional stamps may be acquired only at parks within the particular region. Cancellation marks are collected only within the particular parks. The Passport book, national stamp and Western regional stamp can also be purchased by mail order from the Yosemite Association. Please remit payment for amount of purchase, plus $1.00 for shipping and handling. Net proceeds on passports and stamps sold will be used to support the interpretive programs of the National Park Service.

YA Opens Development Office in San Francisco

The Yosemite Association has just opened a development office in the heart of the San Francisco financial district. With its strategic location, the Association expects the new office to give greater visibility to the Yosemite Fund campaign, as well as serve as a base for fundraising efforts in northern California.

Staffing the office is Mary Lou Edmondson, the Association's new development officer for northern California. Mary Lou was most recently Community Relations Administrator for Potlatch Corporation. During her 10 years at Potlatch, she managed the company's corporate and foundation giving programs, wrote, edited and produced company publications, directed fundraising events and performed a variety of other public relations functions. She has served as a board member and consultant to various non-profit organizations.

A native San Franciscan, Mary Lou graduated from UC Berkeley with a degree in Humanities.

In her new capacity, Mary Lou is working with the Yosemite Association staff and Board of Trustees, as well as the Yosemite Fund Board of Directors in promoting the Yosemite Fund campaign, coordinating corporate, foundation and individual solicitations, and assisting in other Association activities.

Yosemite Association President Steve Medley said, "Our new office in San Francisco should allow us to be more effective in our fundraising efforts for the park, and we're pleased to have someone with Mary Lou's qualifications working there for us." Association members and Fund donors are encouraged to call the Association office (415) 434-1782 with any questions related to the campaign. Or, drop by at 155 Montgomery, Room 210.

In fact, if you would like to help out the new office, the Association is looking for a few guest chairs, computer work station, and a small conference table. If you have or know of any available, please call the number above. All donations to the Association are tax deductible.

The office space was donated through the efforts of Yosemite Fund Director William Cahill and Peter Cahill of San Francisco. The Yosemite Association signed a one-year lease, beginning in August, with free rent for the first six months, and a very nominal charge for the balance of the year.

Office furniture was donated by Yosemite Fund Chairman Byron Nishkian. The Association would like to thank Bill Cahill, Peter Cahill, Byron and the other directors who worked to locate office space and furnishings.
Autumn Books of Interest

The following selection of books are works which chronicle the wide and varied scope of Yosemite and the High Sierra region, or the national parks generally. All can be purchased from the Association at the Yosemite Valley Visitor Bookstore, or by mail order, using the order form on page 14 of this issue. Members of the Association are entitled to a 15% discount off retail prices.

Gentle Wilderness: The Sierra Nevada
A reprint edition of the Sierra Club's beautiful, original 1967 volume, from their Exhibit Format series. Eighty magnificent color plates, accompanied with text selections from John Muir's A Hospital in the Sierra. A wonderful representation of this spectacular mountain range.

The National Parks
David Muench, Photographer, with text by Michael Frane. Rand McNally, 1986. #15500, cloth $45.00.
This is the definitive treatment of one of America's greatest natural resources—our national parks. The book is a celebration of the most glorious and spectacular natural sites in the U.S. It has been praised by geographers and reviewers alike since the first edition appeared in 1977. This updated edition has been revised to include the newest parks in the Alaskan wilderness. The standard of excellence remains the same, however, with descriptive, lucid text and more than 120 breathtaking full-color photographs. The talents of perhaps the best American landscape photographer—David Muench—combine with the knowledge of the foremost expert on the National Park System—Michael Frome—to produce a stunning portrait of these popular and deservedly preserved areas.

Wild California: Vanishing Lands, Vanishing Wildlife
Tupper Ansel Blake, photographer; with text by A. Starker Leopold. University of California Press, 1985. #18415, cloth $40.00.
The universal spread of civilization has encompassed the wilderness of California. While some of the original ecosystems have been preserved, others have been reduced to tattered remnants. Rich and varied habitats, with their plants and animals, are gone forever, destroyed by the conversion of valley lands to agriculture, the damming of streams, the cutting of forests, the paving of meadows. Wild California makes a persuasive argument for identifying and protecting areas of unspoiled California before they disappear.

First published in 1977 in a limited edition printing of 300 copies available by subscription only, this work has once again been released in a new, revised and more affordable edition. A noteworthy work of interest to all Muir aficionados and scholars, this book is a most valued reference tool. The Kimes have spent decades thoroughly researching all known published Muir items. Their text consists of very readable and informative bibliographic entries on each of these books, newspaper and magazine articles, and other printed works. Casebound, 8½" x 11", containing 34 photographs. A must for any John Muir or California book collection.

California: Magnificent Wilderness

This oversized full-color portfolio takes you on a photographic journey through California that is inspiring and exhilarating. A collection of 92 brilliantly vivid photographs have been assembled in this extraordinary gift-quality volume.

California Mountain Range
Russell B. Hill. Falcon Press, 1986. #6626, paper $14.95; #6627, cloth $24.95.
This treatment of mountainous California is written from a geographic perspective. From fantastic cliffs to gentle hills, the beauty and diversity of these special regions are explored. The first in the "California Geographic Series," the book features fine, full-color photography.

California: Sierra Nevada
A celebration of the piercing beauty of the Golden State's most awesome mountain range. Ranged precipitously from the cracking lake beds of the Mojave, the snow-bound Sierra soar northward along 400 miles of glacially carved valleys, harsh granite cliffs, and palisade barriers. The nuance of the alpine world, with its sudden storms, harsh climate, granite fortresses, and gentle flowers is well-interpreted with the 54 fine color photographs accompanied by Fielder's short poetic reflections. The book opens up the magnificent domain of a world rarely visited and seldom seen.

Ansel Adams: Classic Images
Here is Ansel Adams' own selection of the images by which he wanted to be remembered. The seventy-five photographs reproduced in Classic Images were hand-picked by Adams in the last years of his life as the best examples of his work.

continued on next page
The Yosemite Fund is Paying Off!

The summer of 1986 was an important one for the Yosemite Fund—not so much for the money that was raised but for the money that was spent. Several significant projects and programs were made possible because of supplementary funding that had never before existed.

What's gratifying about that is that Yosemite is already directly benefiting from privately raised funds, and the purposes of The Yosemite Fund are being served.

What follows is a summary of some of the items and activities that received financial support from The Yosemite Fund over the past several months or that have been approved for funding.

**Student Interns:** A total of 11 student interns were brought to the park this summer, and they provided important staff support for National Park Service personnel. Nine of the students worked in the Division of Interpretation, while there was one intern for each of the Backcountry and Resource Management offices. Students were selected from such institutions of higher learning as the University of California, Davis, Stanford University, and Cal State University at Sacramento. Thanks to the interns, the educational needs of Yosemite were better met, and the resources of the park were better protected.

**Peregrine Falcon Augmentation:** Because the NPS budget for the peregrine program was insufficient this year, The Yosemite Fund was utilized to continue what has proved to be a successful effort. Monies were made available to provide for housing and a vehicle for a nest attendant, and the Santa Cruz Predatory Bird Research Group was paid for augmentation of one nest and for eggshell analysis from two nests. As well, The Yosemite Fund financed the purchase of signs that were placed below the nest site in Yosemite Valley that closed the climbing route passing near the nest.

**Obsidian Artifact Analysis:** A large number of obsidian artifacts have been found cached in late Valley and near Glen Aulin in the Tuolumne River gorge. For financial reasons, a detailed analysis and reporting of these artifacts has never been accomplished. To help learn more about Yosemite's prehistoric past, The Yosemite Fund will partially finance the study of the materials, with components to include x-ray fluorescence spectroscopy, illustration, photography, half tone prints, and report reproduction.

**Mono Lake Committee:** With funding from The Yosemite Fund, The Mono Lake Committee undertook a summer interpretive program in Lee Vining this year. Included in the grant were monies for a part-time program supervisor, an information coordinator, intern salaries, an intern coordinator, and slideshow development. This program was funded through the grant from The Yosemite Park & Curry Co.

**Great Grey Owl Research:** A four-year research study of Great Grey owls in Yosemite has been undertaken to determine the effect of humans on reproduction and territoriality. Through The Yosemite Fund, a large amount of research equipment has been purchased including 10 radio transmitters, 2 receiver/scanners, 4 antennae, a microphone and parabolic dish, 10 sectional ladders and a tape recorder. This research project was selected by Chevron USA as a beneficiary of Chevron's generous gift to The Yosemite Fund.

**Giant Sequoia Policy Review:** In response to criticism of and concern for prescribed burning practices in sequoia groves at Sierran national parks, the NPS convened a task force of knowledgeable people at Sequoia National Park to make recommendations concerning burning policies. The Yosemite Fund was called upon to help with the expenses of the various experts and other participants. Because private funding was available, this important conference was held, and a significant report should soon be forthcoming.

**Merced Canyon Committee:** The US Forest Service released its wild rivers environmental impact statement for the Merced this summer, and with Yosemite Fund monies, the MCC researched, prepared, and published a response to that document. The budget included word processor and printer, staff, research expenses and publications expenses. These monies were also provided from The Yosemite Park & Curry Co. grant.
A Summer Day on the Alpine Desert Plateau

The plateau forms a gently sloping surface between 11,200 and 12,200 feet just east of the Sierra crest. From surrounding peaks it appears to be a bleak, gray boulderfield, rather uninteresting compared to the ragged peaks along the crest of the range. And yet there is something singular about this place that continues to draw the eye, even from afar. What is a flat-topped mesa doing in a world of jagged, glaciated peaks? A closer examination will reveal its true significance.

Early Morning

Halfway up the loose talus on the side of the plateau, springs gush from the rock, forming an oasis of tufted hair-grass tussocks almost knee high. Although it is mid-summer, the tussocks are still frosted, and there is ice along the edges of the streamlet. In the protected hollows between the tussocks there is an alpine garden of pearlworts, starworts, wintercress, and the rare white-flowered Draba praealta, virtually restricted to a few such oases along the Sierra crest. Later the edges of the tussocks will be ablaze with fireweed, and blue and yellow tinted alpine columbines. But this is just a prelude to the symphony.

Only a few feet from the edge of the springs the boulderfields and talus abruptly begin again, and curve ever upward, eventually stabilizing on the edge of the vast, rolling alpine plateau. The sun breaks over the edge of the plateau, spilling a crisp, white desert light across the fellfield.

Late Morning

From the edge of the edge of the plateau, fellfields extend to distant but undefined horizons. There are no large objects on the plateau from which to gauge distances. This is an ancient land, eroding for 30 million years as the Sierra was uplifted, never touched by glacial ice even at the height of the ice ages. Eons of weathering have created a thin alpine soil here, interspersed with small rocks formed into garlands and streams by frequent frost heaving. This "patterned ground" is characteristic of alpine tundra in the Rocky Mountains and in the far north, but is rare in the young Sierra Nevada.

The plateau is a shimmering mirage of heat waves rising in the still air. The bleakness of the fellfield is also only a mirage, masking the reality of an alpine world with a diversity of life rich beyond all expectations. Almost half of all the species of alpine plants in the High Sierra, with an alpine area stretching almost 300 miles, grew on this 700 acre plateau. They came from the Great Basin desert, and down from arctic and boreal regions, and also from the west as the climate of California changed rapidly in the last million years.

Stephen J. Botti is Resource Management Specialist for the National Park Service in Yosemite.
Here they found refuge from the Pleistocene ice, and in splendid isolation, genetic drift and reproductive isolation accelerated evolution, producing many new endemic species. Most of the plants are tiny, but very colorful.

Crawling on hands and knees is the best way to explore the pygmy world of the fellfield.

There are two bright daisies here, the dark-purple *Eriogonum pygmaeum*, and the paler and taller *Eriogonum hookeri*. Alpine Spiny-Kettleweed, and Wooly-pod Kettleweed crouch low in the shelter of rocks; one with very prickly leaves, and the other with very wooly pods like fuzzy mittens. Splayed on the gravels are the grayish oval leaves and reddish spherical flowering heads of buckwheat, *Eriogonum lobbi*.

Dense gray cushions of two other buckwheats, *Eriogonum ovalifolium* and *Droserum incanum* are nearly ubiquitous on the fellfield. Buckwheats have undergone rapid evolutionary change during the era uplift, and the minute differences between them are ever-changing to the botanist. The fellfield is peaceful and silent, accentuating the perception that in this world time is measured by a different clock.

Moon

The slope steepens ever so gradually, rising toward the pyramid of Plateau Point, the extreme southern end of the plateau. This is the domain of Lyall's alpine, spreading everywhere between streams of rocks that have been sorted and packed into neat lines by the frost. Along the edge of Plateau Point the large sunflower-like heads of Alpine Gold and the large blue flowers of the famous Sky Pilot, *Polemonium nutans*, stand 9 inches high in defiance of the elements. But the fellfield is dominated by subtle roses: the reddish spiklets of Tamarine Bluegrass and the black heads of Heller's sedge.

Clouds are building over Mt. Dana, and the wind is rising. The air is thin, and without the sun it turns biting cold.

Early Afternoon

The walk to Sharsmith Point is a struggle again with a howling gale. Hailstones are plummeting from the clouds, bouncing off the rocks, and collecting in depressions. The wind increases dramatically near the point, a rocky brow hanging over the abyss created by ancient glaciers that carved a headwall against the plateau. The mantle of life is thin here. Cushion plants clench tenaciously at the earth against the cold, desiccating wind.

The plateau suffers the harshest climate in the Sierra Nevada. In the winter the plants are stripped of their protective cloak of snow by the incessant wind. The fellfield is exposed even when surrounding areas may be buried under 15 feet of snow. The plants struggle to withstand temperatures as low as — 30 degrees F and the blowing granular snow tears at their stems. Without melting snow in the spring, water is scarce; only an occasional thunderstorm brings relief to the alpine desert, and even this water quickly disappears into the coarse gravel. The quintessential cushion plant, *podostena nevadensis*, sprawls like a blanket over the sand and rocks—it seems almost two dimensional. A crushed leaf has a pungent celery-like odor, revealing the plant's familial relationship to parsley and other umbels.

The fellfield plants have adapted to the drought, bitter cold, and intense light by several means. By growing low, they remain in the relatively calm sur-

face, providing an array of tiny solar panels. Their leaves are usually succulent to conserve water. Their ability to flower early and quickly complete the growing cycle is probably the most essential adaptation for survival in the short alpine summer.

Mid-Afternoon

Sedges and grasses have formed a turf-like tundra in the central plateau depression where seeps emerge from the surrounding fellfields. The water-saturated soil is slowly flowing downhill under the influence of nearly constant freezing and thawing, creating solifluxion terraces. On the terraces small ponds stand behind levees of sedges. Here is an old friend, the rare single-spiked sedge with the name that rolls off the tongue, *Carex pseudopunctata*.

Along the boundary of the tundra and fellfield two tiny willows barely rise from the turf. The arctic willow has pale hairy leaves, while the snow willow has dark shiny green leaves. Bitertrods are crowned with a rosette of white flowers along the edge of melting snowbanks. The sun peeks from behind a cloud, spilling warmth on the tundra.

The wind dies in the aftermath of the spent storm.

Evening

The walk west from the Zen garden of boulders and sand on the level north saddle is filled with expectation. Even before they are visible, thousands of lupines fill the air with perfume. Ahead lies the crowning glory of the plateau: North Point. This fellfield has been subjected to the most advanced erosion on the plateau. A smooth convex pavement of tiny interlocking stones is covered with an alpine garden of lupines, ivesias, daisies, starworts, and buckwheats unequalled anywhere in the high Sierra. There is no place to step without crushing flowers. The dominant lupine here is the high altitude Sierran endemic, *Lupinus hypolasius*, more robust and leafy...
Yosemite Scores “Ten” With the Sealoves

Penny Otwell & Steve Medley

What do two married people do when in the prime of their lives they quit their jobs and sell their home? In the case of Arnold and Jeanne Sealove, they enroll in ten field seminars with the Yosemite Association as the first stop on a three-year odyssey touring the United States and Canada. Outfitted with a fifth-wheel travel trailer and filled with curiosity and anticipation, the Sealoves appeared in Yosemite this spring eager to learn in depth about the park and its natural wonders. We were delighted to welcome them.

This was definitely an “early” retirement for the Sealoves, and they each arrived sporting a healthy look, a youthful glow and a deep tan. Further, their rationale for the adventure proved to be quite sane and logical—they hoped to learn and see as much as possible of the natural beauty of North America, and they wanted to do it while they were still able to hike, swim and otherwise physically enjoy the experience. To develop and prove their fitness for the task, Arnold and Jeanne undertook a marathon of outdoor programs — 10 Yosemite field seminars in three months.

With a special interest in natural history, the Sealoves selected courses which offered “a broad background of the environment and the early Indian culture.” Starting in late spring with the “Waterfalls” class, they ran the gamut of field courses from an “Introduction to the Natural History of Yosemite” to “Universal Patterns in Nature.” Their class list reads like the chapter titles for a basic natural history textbook: geology, astronomy, birding, archeology, subalpine botany and ethnobotany.

What courses did they enjoy the most? For Jeanne it was “Subalpine Botany” and the discovery of the fragile ecosystems and their plant components. For Arnold, “Universal Patterns in Nature” really tied together all the other courses and helped develop a better overall understanding of the natural world. This class provided “the amazing realization that everything in nature is interrelated — from botany to geology.”

It was a time filled with unforgettable experiences for the Sealoves, and to insure that they don’t forget, Jeanne has organized a photo album filled with snapshots of activities and a group photo of all of the participants for each class. As it turned out, the fellow students were as important as the out-of-doors and the instruction. As Jeanne put it, “the people impressed me the most; everyone was so relaxed and pleasant.”

Now it’s off to the Southwest for the winter followed eventually with excursions to the Grand Canyon, Bryce, Zion, Lassen, the Cascades and Canada. The adventure continues for the Sealoves, and we wish them smooth sailing, good weather and lots more seminars.

Autumn Books
Continued from page 8

Adams' photographs included most of his famous and best-loved images and encompassed the entire range of his sixty-year career and range from his beloved Yosemite to the Pacific Coast, the Southwest, Alaska, Hawaii, New England, and the Northwest.

James Alinder, Director of The Friends of Photography, contributes both a fine biographical essay on the development of Adams as a great American artist and a chronology. In his introduction, John Szarkowski, Director of the Department of Photography at New York’s Museum of Modern Art, speaks to the extraordinary love that Americans have for Ansel Adams and his heroic work, reflecting that “Adams’ photographs seem to demonstrate that our world is what we would wish it was — a place with room in it for fresh beginnings.”
Yosemite National Park Raised Relief Topographic Map.
- $37.70 unframed 12\%x18\%$, $14.95$.
- $37.75$ framed 18 $\times$ 21\%, $19.95$.
Full-color raised relief maps give all the information of ordinary flat topo maps including physical features and political boundaries, plus a scale model of the terrain accurately and realistically reproduced on durable plastic. Trails are not marked. Map scale is 1:250,000; contour intervals are 100'. Prepared from the latest U.S. Geological Survey map base of this area. The map is available unframed, or with a solid wood frame with two-tone precut mat, ready for you to mount your own photos of Yosemite.

Yosemite and the High Sierra (Video Cassette).
- #1560 (Beta), #1561 (VHS), $29.95$.
Long-time park naturalist and photographer Bob Roney produced this program with an insider's perspective. Viewers enjoy a winter trip into snow-laden backcountry, experience a climb of Cathedral Peak, and accompany a hang glider as he floats down from Glacier Point. 55 minutes.

Go Wild! Game.
- #4477, $5.95$.
Yosemite's very own game! This exciting card game is about Yosemite National Park. The 133 playing cards are beautiful color photos of famous scenes, birds, animals, trees, wildflowers, etc. A game of luck and strategy much like cut-throat rummy. For all ages.

1987 Yosemite Association Poster Wall Calendar.
- #01281, $4.95$
This year's Association calendar is a reproduction of watercolorist Ellen Frank Chan's "Yosemite Memories." The original painting was part of the Yosemite Renaissance exhibit of 1985. Black and white with red border. 23"x25".

Yosemite Scenic Notecards.
- #3745, $6.95$
Beautiful color images of Yosemite grace these assorted notecards of Kennan Ward, noted California photographer. Ranging in subject from broad panoramas to detailed close-ups, the 5"x7" cards come in sets of eight, with sturdy, textured envelopes.

Ansel Adams: Photographer (Video Cassette).
- #4566 (Beta), #4567 (VHS), $29.95$.
An absorbing and warmhearted portrait of Ansel Adams, one of the greatest photographers of the 20th century. The film captures the spirit and artistry of the man as he talks about his life and demonstrates the techniques which have made his work legendary. Filmed on location at many sites of his most famous photographs. 60 minutes.
Yosemite Association T-Shirts
Comfortable, heavy quality, 100% cotton Hanes "Beefy-T" shirts are printed with the Yosemite Association's handsome Half Dome logo on front. Children's sizes are available in short sleeve; adult sizes in short and long sleeve.

- Color: Tan with brown emblem.
- Child sizes (short sleeve): small, medium and large #1650, $7.05.
- Adult sizes (short sleeve): small, medium, large and extra-large #1675, $9.40; (long sleeve): small, medium, large and extra-large #1680, $11.75.

Yosemite Association Decals and Patches
Our association logo, depicting Half Dome is offered to our members in these two useful forms. Help announce your affiliation with our organization to others by purchasing and using Yosemite Association patches and decals: Patch #1635, $1.50; Decal #1636, $1.00.

Yosemite Association Cap
#1600, $6.00.

Complete your outdoor wardrobe with this trendy item from the Association collection! It's the perfect hat for a hot, sunny day in the great outdoors — mesh fabric to keep a cool head, a generous bill to shade your face, and adjustable strap in the back to insure a good fit for everyone. All of this plus the Yosemite Association patch to let everyone know what your favorite organization is! Brown with white accent.

Pelican Pouch
Wilderness Belt Bag #1690, $11.95.
The Pelican Pouch is not only perfect for carrying field guides, but also offers instant access to all the small items that are usually buried in your pack — pocket camera, lenses, maps, or your favorite trail mix! The Pouch is designed with front snap fasteners on the straps. This allows comfortable positioning on your belt — even between belt loops; no need to take your belt off first. The material is high quality Cordura pack cloth with a waterproof coating on one side. Beige with the dark brown and white Yosemite Association patch, the Pelican Pouch measures 8 x 5 x 2½ inches.

Yosemite Enamel Pin
#1695, $11.95.
Designed especially for the Association, our enamled metal pin is a work of art. Each of the 10 different glazes is hand placed and separately fired. The result, from William Spear Design, is an eye-catching and colorful piece. The metal enamel pins are relief engraved in a ¾" x 2" size.

Yosemite Association Mug
#1625, $5.00.
This distinctive and functional white ceramic mug has our logo and name imprinted in brown. Holds eight ounces of your favorite beverage.

Yosemite Fund Mug
#1626, $5.00.
This mug is decorated with the newly-designed scratchboard logo for use in conjunction with Yosemite Association's fundraising effort. White with black design, eight ounce capacity.

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6% Sales Tax (CA customers only) 
Shipping charge: $1.50 
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Ordered by: 
Name: 
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Membership Number: 
Yosemite Association, P.O. Box 230, El Portal, CA 95318
Alpine Plateau

from page 11

than its cousin dominating the south end of the plateau. There is an orderliness to the distribution of plants across the gravel, complementing the orderly procession of flowering on the plateau. The process begins on the slopes of North Point in July, then advances along west and east ridgelines and up to South Point, and finally culminates on the tundra and along the edges of late snowbanks. The golden light of the late afternoon is still warm here even when the rest of the plateau has plunged into shadow. The horizon fades into a blue haze of late sun, then advances along the distance. Out of this haze the horizon stretches endlessly to the south, finally merging with the gray sky.

New Members

We would like to welcome to the osteomeite Association the following persons who became members within the past three months. Your support is greatly appreciated.

Regular Members

Join the Yosemite Association

You can help support the work of the Yosemite Association by becoming a member. Revenues generated by the Association's activities are used to fund a variety of National Park Service programs in Yosemite. Not only does the Yosemite Association publish and sell literature and maps, it sponsors field seminars, the park's Art Activity Center, and the Ostrander Lake Ski Hut.

A critical element in the success of the Association is its membership. Individuals and families throughout the country have long supported the Yosemite Association through their dues and their personal commitments. Won't you join us in our effort to make Yosemite an even better place?

Member Benefits
As a member of the Yosemite Association, you will enjoy the following benefits:

- Yosemite, the Association bulletin, published on a quarterly basis;
- A 15% discount on all books, maps, posters, calendars and publications stocked for sale by the Association;
- A 10% discount on most of the field seminars conducted by the Association in Yosemite National Park;
- The opportunity to participate in the annual Members' Meeting held in the park each fall, along with other Association activities;
- A Yosemite Association decal;
- Special membership gifts as follows:
  - Supporting Members: Matted print from an illustration by Jane Gyer in "Discovering Sierra Trees";
  - Contributing Members: Full color poster of Yosemite's wildflowers by Walter Sydorak;
  - Sustaining Members: Matted color photograph of a wildflower by Dana Morgenson;
  - Life Member: Matted color photograph by Howard Weamer of a Yosemite scene; and
  - Participating Life Member: Ansel Adams Special Edition print, actually mounted.

Membership dues are tax-deductible as provided by law.

Please enroll me in the Yosemite Association as a . . .

- Regular Member $20.00
- Supporting Member $35.00
- Life Member $500.00
- Contributing Member $50.00
- Sustaining Member $100.00
- Participating Life Member $1,000.00
- Spouse add $5.00

Name (please print): Phone Number:
Address: City: State/Zip:

Enclosed is my check or money order for $ , or charge to my credit card
Bankamericard/VISA: Number Expiration Date
MasterCard: Number Expiration Date

Mail to: Yosemite Association, Post Office Box 230, El Portal, CA 95318. 209/379-2646

Moving?
If you are moving, or have recently moved, don't forget to notify us. You are a valued member of the Association, and we'd like to keep in touch with you.

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