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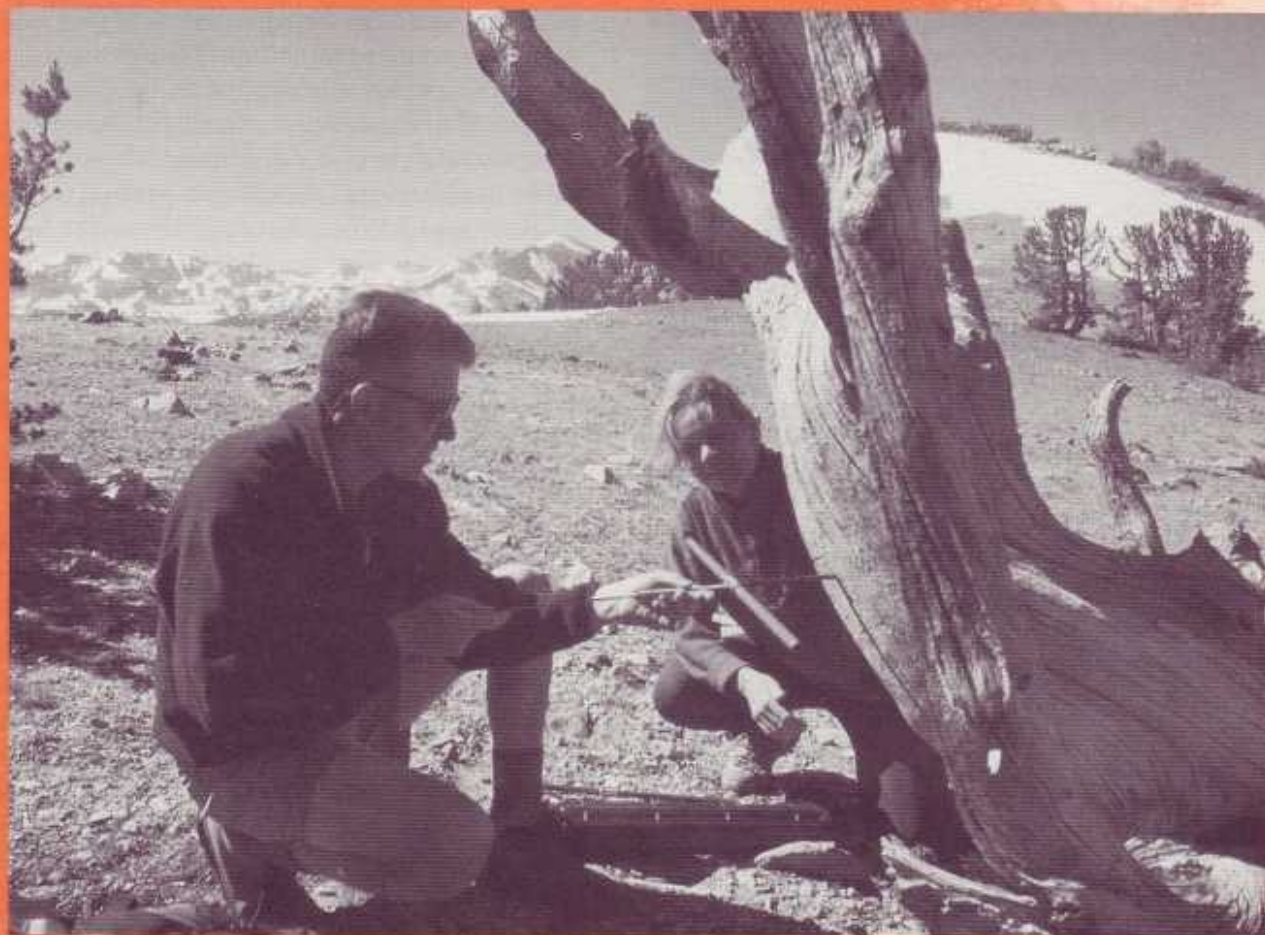
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Yosemite's Tell-Tale Trees



YOSEMITE'S TELL-TALE TREES

BY JEFFERY G. LAHR



Patches of snow conceal themselves among the shadows of the trees, vestiges of an exceedingly hard winter lasting long into the traditional summer months. The warmth of the August sun is not to be trusted as we begin our hike; our day packs bulge, lumpy with layers of warm clothing. At this elevation, the weather can be both extreme and volatile, changing moods more quickly than a tired two-year old.

Our ascent begins near the Tioga Pass entrance to Yosemite National Park at the trailhead to Gaylor Lakes. Ahead of me are Dr. Lisa Graumlich and John King, research scientists studying the growth patterns of sub-alpine trees, based at the Laboratory of Tree-Ring Research at the University of Arizona. Our destination is treeline, that point in elevation where conditions become too harsh and the growing season too short to sustain tree life. Severe winters, dry summers, poor soil—it takes a tough tree to survive these circumstances. The trees at timberline are on the front lines of the battle for life.

EXTREME RESEARCH

The objective of today's hike is to climb above the rela-

tively protected area of the Tioga Basin to core-sample whitebark pines living in this zone of environmental extremes. Trees here are bent and shaped by the struggle with the elements. Each year is a new battle in a fight for survival, faithfully recorded in annual growth rings. A tiny sample of each tree's core is removed and taken back to the lab at the University of Arizona. There it is deciphered to reveal the climatic and environmental patterns that existed long before humans were recording the weather.

Because they study ancient climatic conditions, Lisa and John carry the impressive title of paleoclimatologists. Because they analyze the growth patterns of trees for this study, they are also dendrochronologists (Greek roots *dendron* means tree, and *khronos* is time). It is some relief to me that despite their polysyllabic titles, Lisa and John converse with words I can more or less understand.

As a naturalist ranger working in Yosemite, trees and time are of interest to me. Understanding dendrochronology will help me better appreciate the "Big Picture" and the part that trees play in it.

THE SCIENCE OF DENDROCHRONOLOGY

Dendrochronology is a fairly recent branch of science. But even children know its underlying premise—you can tell the age of a tree by counting its rings. Researchers have used bristlecone pines, the oldest living trees, to create a continuous record that dates back to about 6700 B.C. The technique reveals more than the age of the tree, however. The study of the width and structure of the rings reveals many natural forces that affected the growth of the tree. In the rings, scientists can detect long-term drought cycles, fire history, and even seismic history such as volcanic and earthquake activity.

On this summer day we climb to the upper limits of the whitebark pine's range. Even though it's August, the thin air has a crisp bite and the ridge winds pick up as we near the summit. Gratefully, I catch my breath as Lisa stops to point out the trees below us. "These trees," she says, pointing to the lodgepole pines nestled below tree line, "are happy trees. They have lived their lives in a relatively protected area. Their rings are more uniform because of a less extreme environment. Because of this they aren't as helpful in discovering past climate conditions. Trees exposed to the seasonal extremes provide a more accurate climatic history."

I am quick to recognize that this revelation means that we will spend the day climbing to the highest ridges in the



JEFF LAHR

area. We continue our ascent. My heart is pounding and I gulp the thin air. I try to convince myself it's the elevation, not that I'm out of shape. But how do you prepare for a day of dendro-aerobics?

SURVIVAL OF THE SMALLEST

Within a few minutes we are rewarded with the magnificent panorama that is the prize for scaling the summit. Near timberline our view is not obscured by hanging branches or wide trunks. The trees here are dwarfed in size—natural bonsai. The whitebark pines grow matted, close to the ground, and are known as elfinwood or *krummholz* (a German word meaning “twisted wood”). Instead of growing upright, like most trees, *krummholz* spread across the rocks in matted thickets. And the contorted trunks of these trees contain rings that will reveal the environmental forces with which they have successfully reckoned.

TREE SURGERY

Reaching the top of the ridge, we pause briefly to add another layer of clothing to protect us from the hard wind sweeping across the summit.

Lisa and John survey the ridge looking for suitable trees to sample. We climb a short distance to an outcropping of granite, where a gnarled tree sends vertical branches skyward. The spindly leaders rise out of the ground-hugging trunk, standing as straight as the tail of

Dendrochronology is a fairly recent branch of science. But even children know its underlying premise—you can tell the age of a tree by counting its rings.

a wet cat. John grasps one and explains its significance.

“I am particularly interested in these growth shoots,” he says swaying the supple limb with his hand. “This may be the birth of a typical upright tree growing from a *krummholz* start. Each year the matted trees attempt to grow into upright forms. In ‘typical’ harsh climate years, vertical growth is retarded by the environment. If environmental conditions moderate for several years, the vertical stems survive and the tree form is altered. So, these upright shoots indicate that climate conditions changed long enough to allow them to develop and grow.”



John reaches into his back pack and pulls out the increment borer. “Good,” I think to myself, “this is what I’ve come to see. The surgery is about to begin.”

The increment borer is a narrow tool (in an attractive blue metal tube that doubles as the handle) used to wrench the sharp-bladed head through the tree. It is smaller and more fragile-looking than I had imagined. The drill itself is thinner than my car’s radio antenna. Delicately, the head of the borer bites into the bark of the tree. (See cover photo). With just a few twists of the handle by John, the head emerges through the other side of the trunk. When the instrument is removed from the tree, a small ringed sample comes along with it. Almost immediately the tree secretes resin to heal itself from the small laceration. “It’s less painful than giving blood,” I think with envy.

“We bore into the tree and remove a small sample of the tree’s core,” Lisa explains.

THE BIG PICTURE

The rings record the climatic conditions through their growth pattern. During wet years, the cells produced by the tree are larger and lighter in color, and create a visibly wider ring. During times of drought, the rings are dark and bunched together. These are the signs the paleoclimatologists use in creating a model of past climatic conditions over hundreds of years.

After sampling a few more trees, we sit down on the lee side of a rock outcropping, seeking refuge from the wind. The view beyond Gaylor Lakes toward Tuolumne Meadows is imposing. The sweeping panorama reminds us that we are part of a larger scene.

“Each tree gives an individual account of its immediate surroundings,” Graumlich explains. “But to reconstruct climate models, we need to document that trees throughout the region show a similar account. This will rule out site-specific influence.”

Above: A Tucson TV crew filming the research.

Opposite: A dead pine is sampled. Its core can be cross referenced with a living tree.

Despite these obvious differences, the sequoias, like the white bark pines, yield a reserve of information about the many factors that have influenced their growth through the millennia. The mighty sequoia's rings present an autobiography of the environmental events within its lifetime.

Abandoning our refuge behind the rock, we stretch our legs and prepare to move on to our next stop. We take in the vista one last time.

"This is a pristine area," Graumlich remarks. "The information we gather here allows us to create a benchmark to use in exploring the impact humans have had on the world in the twentieth century."

It is a great view, I think to myself, as if I am looking at it for the first time. Until now, I never realized that to get the Big Picture that I am so concerned about, it would be necessary to look so far back in time.

A STRIKING CONTRAST

The *krummholz* provide a survival lesson, for they have masterfully adapted to the extreme environment. Their diminutive size has allowed them to endure where larger trees cannot. Giant sequoias provide a startling contrast to the squat elfinwood. They stand as the bold exclamation points of the forest, dauntless in their defiance of the elements. With thick protective bark and an essential elixir of tannic acid, these trees present the prototype image of unyielding strength. As the largest living thing ever to inhabit the earth, the giant sequoia wears its age as a mantle of distinction. Despite these obvious differences, the sequoias, like the white bark pines, yield a reserve of information about the many factors that have influenced their growth through the millennia. The mighty sequoia's rings present an autobiography of the environmental events within its lifetime.

Dr. Thomas Swetnam, also from the Laboratory of Tree Ring Research at the University of Arizona, and his associates have returned to Yosemite for several years to study the growth rings of the big trees to determine the history of fire in the sequoia groves. Fire scars and tell-tale growth patterns in a sample of trees can show the historical frequency of fire.

Operating on the largest living things on earth requires an ample array of surgical tools. Chain saws—used to cut a large slice of dead wood—supplement the delicate increment borers. Dr. Swetnam is quick to note that only dead wood—logs, stumps and snags—are sampled with the chain saw. While Graumlich and company often return to the lab with no more than a quiver full of samples, Swetnam sometimes needs several trucks. At the lab, belt Sanders smooth the wood samples to permit more precise ring analysis.

Sequoias have been sampled in five groves in Yosemite and Sequoia National Parks. All five groves show remarkably similar fire histories, suggesting that climate played a more important role than did specific factors at individual sites.

Walking through the giant sequoia forest, it is easy to see evidence of fire in the deep, gnarled markings of the mature sequoias. Sometimes these scars are huge, climbing sixty feet up the trunk, or disemboweling the heartwood of the tree to create a living chimney. These blackenings are not created by one or two fires, but by dozens of individual fires, each contributing to the shape of the scar. Fire seems to have created an individual personality in the older trees of the forest, giving each tree its own distinctive profile.

But evidence of fire suppression is equally apparent. Groves have experienced an ever-growing accumulation of duff—organic litter or tree trash that litters the ground. Because the overgrown canopy shades the forest, little vegetation grows on the forest floor. It is extremely difficult for sequoia seedlings to survive under these conditions. A fire is needed to create a more natural sequoia forest.

The studies of Swetnam and associates demonstrate that fire was a frequent visitor to the sequoia groves. Swetnam's work has helped provide a more realistic model of a natural sequoia grove before fire suppression began at the end of the last century. Historical fire regimes were more complex than first imagined. Instead of a consistent cycle of fire patterns, fire records indicate



Jeff Lahr

Igniting a prescribed burn, Mariposa Grove, Yosemite National Park



Jeff Lahr

Giant Sequoias hold a wealth of information about factors which influence them through the centuries.

that the frequency of fire is closely associated to the climate pattern of a given time period.

LIVING TEXTBOOKS

Graumlich's study of early climates and Swetnam's study of fire provide an interesting contrast in subjects encompassed by the science of dendrochronology. Graumlich wanders the rocky crests and exposed ridges of the Sierra Nevada searching for twisted trees dwarfed by exposure to an extreme environment. Swetnam's subjects tower above him in the more temperate elevation of the mixed conifer forest. But even Graumlich studies paleoclimatology and Swetnam fire ecology, the findings of each appear to corroborate the other's

Graumlich's dendroclimatic reconstructions suggest that droughts lasting from ten to one hundred years occurred in the Sierra Nevada region throughout the past one thousand years. (The twentieth century appears to be an anomaly, with a warmer and wetter climate than in previous centuries.) Swetnam's work indicates that during these same time periods the sequoia groves in this region experienced a higher number of small forest fires. This information can be used not only to reconstruct the climate history but also to prepare for changes in our climate patterns as well. For example, if drier climate patterns return to the region, agriculture and water supplies in California would be greatly impacted.



Jeff Lahr

Fire scars like this one help researchers determine the historical frequency of fire.

Trees are the textbooks of the natural world. Long before John Muir began to record his observations of the Sierra Nevada, the whitebark pine, the giant sequoia, and other species of trees silently kept cellular journals. Until recently, humans were illiterate in the language of the trees. And our current understanding of their language and the information it offers may seem, in years to come, to be rudimentary—that of a primary reader struggling to grasp the simplest expressions. Fortunately, the trees continue to grow, adding yearly chapters to their narrative of the many hardships and environmental events they have endured, allowing new methods for gaining information from the trees to be developed,

If trees can be likened to books, then Yosemite and other national parks are the libraries of the natural world. The national parks remain a refuge for ancient trees, thanks to the actions and words of great preservationists like John Muir. It is now the job of scientists like Lisa Graumlich and Thomas Swetnam to discover as much they can about the irreplaceable trees so that they will be protected for future generations to learn from, and to enjoy.

Jeff Lahr resides in Santa Maria, teaches social studies at the junior high level, and spends his summers in Wawaona as a ranger-naturalist.

THE POST-WILDERNESS BLUES

BY KAREN NAJARIAN

I'm feeling the same fear I've felt at this time of year for the past few years. It's late August and I've just returned from my annual week-long Yosemite Association backpack trip with park rangers Ginger Burley and Laurel Boyers. Things around me—cars, people, time—are moving too fast. The radio is too loud, the television too intrusive, advertising too manipulative and aggressive. Meals seem to just happen and slip by. We don't take time for good, honest deep-talk or lighthearted play-talk. Above my head at night it's just plain dark, and waking doesn't seem the miracle it is when done in my hammock at 9,000 feet. And I fear. I fear I will get used to it all once again.

I find myself in this limbo where even though I drive the streets and walk the aisles and stand in the lines, I don't quite feel a part of it all, like a well-disguised alien wandering amongst the populace. This state of looking in on our urban and suburban lives from the outside gives me a new perspective—a little more truth and clarity about everyday life. As uncomfortable as it is feeling unfamiliar with it all, I know I'll be in real trouble when I once again am comfortable and won't be able to see the craziness for what it is. This is what I fear.

John Van Winkle



Cloud's Rest

The rhythm I fall into so comfortably during my week away is really the rhythm I feel most at home with. And the uncomfortable pace here at home leads me to the truth of where my real home is. Like my neighbor here in Martinez, California, John Muir, "my real home is up there in the Sierra Nevada." It's a testimony to my competence and adaptability that I can live in either world and evidence of my sanity that I find this reentry difficult. And so, I find comfort in the discomfort.

Just next door to John Muir's house is the post office. Being the largest post office in the community, it handles a lot of business. Yesterday found a woman driving in the "out" lane - an honest mistake. The man driving out was shaking his head, the woman started yelling at him, and with her window rolled down, explained the whole wretched situation to me. I stared blankly. I suppose I looked just like everyone else. How could she know I was not yet of her world? I had only dropped my pack the day before and was now just trying to drop off some mail. I envision John Muir's spirit standing on his front porch watching the whole affair. Muir, who called automobiles "blunt-nosed mechanical beetles," would probably be as astounded as I at that moment, that anyone could be in such a hurry or be so angry at someone else over their own mistake. I fear I'll lose my astonishment and my perspective once again and I'll accept exchanges like this as routine.

On the trail we let those faster pass and even sometimes opt to accompany those slower. We share food and water, offer encouragement, and give advice and aid for blisters and boo-boos. Even without walls, and maybe especially because there are none, we respect each other's living space and emotional space. We become a rugged little nomadic Utopian community for one week each year. Everyone brings something to the party. It may be knowledge of wildflowers, the terrain, the flora, the fauna, the geology, or edible mushrooms. It may be wine for the sunset, canned oysters for hors d'oeuvres, the skill of fishing, or something less tangible—a sense of humor, compassion, enthusiasm, stories, songs, passion, energy, or serenity. It's all brought along to share as simply as we bring ourselves and our packs.

Back here in Martinez now, I find I miss the cool swish of the rain-wet, thigh-high lupine



Rex Butler

Tuolumne Meadows

against my bare legs, the flit of butterflies across my path, the crush of my boot on decomposed granite, the gentle heat or coolness of the day, changing moment to moment depending on whether the sun's behind a cloud, and the tingle of the chilly creek water soothing me clean as I hold onto two rocks and let the current stretch me downstream. I can't replace the experience of cooking and eating in a group, the smell of each others' dinners, conversation at meals, soft voices after the evening campfire program. I really miss the laughter—I never laugh as much all year as I do on this YA trip—and the profound sense of belonging . . . just because I'm there. I'd like to keep walking through my life with those folks and never have to fear getting used to the modern world again.

Karen Najarian has been an enthusiastic backpacker for 20 years. A mother of two teenagers, she is married to a fisherman who loves the High Sierra.



Rex Butler

Cathedral Peak from Mt. Hoffman

SIXTEEN WAYS TO SPEND A LOVELY DAY IN TUOLUMNE

BY MARTHA MILLER

GUIDE TO HIKES IN THE TUOLUMNE AREA

In the 1,500 or so acres of the Tuolumne Meadows area and in 1,100 miles of surrounding mountains, there is an unparalleled opportunity to enjoy outdoor pleasures. Only a very foolish—or ambitious—person would attempt to compile or suggest all the places to see and things to do. The many regular visitors who know the area have their favorite haunts and jaunts and their own special ways to enjoy them. This information is assembled as an introduction for the first-time visitor or someone still learning the area.

A topographic map will be useful for the longer hikes. Mileages shown are round-trip.

1. A walk down the Dana Fork, return via the Lyell Fork. A lovely area for pauses and picnics. Kitty Dome (local appellation) at the confluence of the two forks is easily climbed and from the top you will see fine panoramas across the meadows and east toward Mrs. Dana, Gibbs, and Mammoth Peak. The wildflowers are fine here, at the right time of summer. Two miles.

2. To Upper Cathedral Lake. One of the finest day hikes. Take the Sunrise trail as far as Cathedral Pass; turn back to the northeast, following an easy contour upward and across the divide between Cathedral Peak and Echo Crags. From here, drop down to Budd Lake, returning to Tuolumne Meadows via fishermen's trail alongside Budd Creek. Best views anywhere of Cathedral Peaks group. Seven miles.

3. To the "Lakes among Domes." You'll need specific directions on the precise starting point of the fishermen's trail (available at Tuolumne Meadows Visitor Center or lodge). There are two strikingly beautiful small lakes set in granite of Medlicott Dome and its environs. Three miles.

4. To Juniper Ridge from Soda Springs. This hike is a photographer's delight with the twisted, old junipers to frame your pictures of the distant Kuna Crest. Part of the route requires a rocky scramble, but worth the trouble. One mile.

5. Dog Lake, Delaney Meadows, Skelton Lake. This is a long trek but one that will take you through changing forestation, from lodgepole to white bark pine, which is typical of the high country. There are occasional large

meadows dotted with wildflowers. The destination Skelton Lake, lies at 10,500 feet. Nine miles.

6. Skelton Lake is the destination for this hike, too. Route begins at Morain Creek, then over a long ridge to Skelton. The varied and rugged terrain make it a wonderfully primitive area. Nine miles.

7. To High Meadows via Young Lakes. The trail crosses the western shoulder of Ragged Peak where views of 180 degrees of the horizon reveal Mts. Hoffman, Lyell, Maclure, Ritter, and Banner and onward to the peaks of Koip Crest beyond Parker Pass. If you have the time, the summit of Ragged Peak can be attained fairly easily—the views from here are even better. Eight miles.

8. To Kuna Lake, a dramatic timberline lake at the base of Kuna Peak. The lake is set in meadows that are riots of wildflowers in August, during years of normal dampness. Six miles.

9. Up the Dana Fork to Spillway and Helen Lakes hence along the crest to one of the many Gem Lakes. After leaving Helen Lake, most of the hike is above timberline there's no established trail, but the going is relatively easy and the views are immense. Nine miles.

10. Tioga Tarns. These are located about a mile east of the Tioga Pass entrance station, thus outside the park and in Inyo National Forest. The NFS has laid out a self-guiding nature trail, about a mile long, which gives a good introduction to the fascinations of the high country.

11. To Mono Pass. You can easily spend an exciting day in the area. The old log cabins of the Golden Crown mine just above Mono Pass are now weathered to a lovely bronze shade. In addition there are wildflower meadows, the stark beauty of Parker Pass, the red metamorphic peaks, Mts. Lewis, Gibbs, Parker, Koip, Kuna, and the immensity of the view down Bloody Canyon past Sardinia Lakes into the Mono Basin. Four miles.

12. To Bennettville. For the small amount of exertion involved, it is very hard to beat this one. It is only 14 miles from the road to old Bennettville and the vestige of the Great Sierra Consolidated Silver Mining Company. Two beautiful old wooden buildings, now weathered to a golden patina, sit above green meadows covered with wildflowers even in a dry year, between the towering peaks

of Mt. Dana to the south and the great red crown of Tioga Peak to the northeast. Mine Creek rushes past, carrying the runoff from Shell and Fantail Lakes just above the old mining camp. A special for photographers. Two and one-half miles.

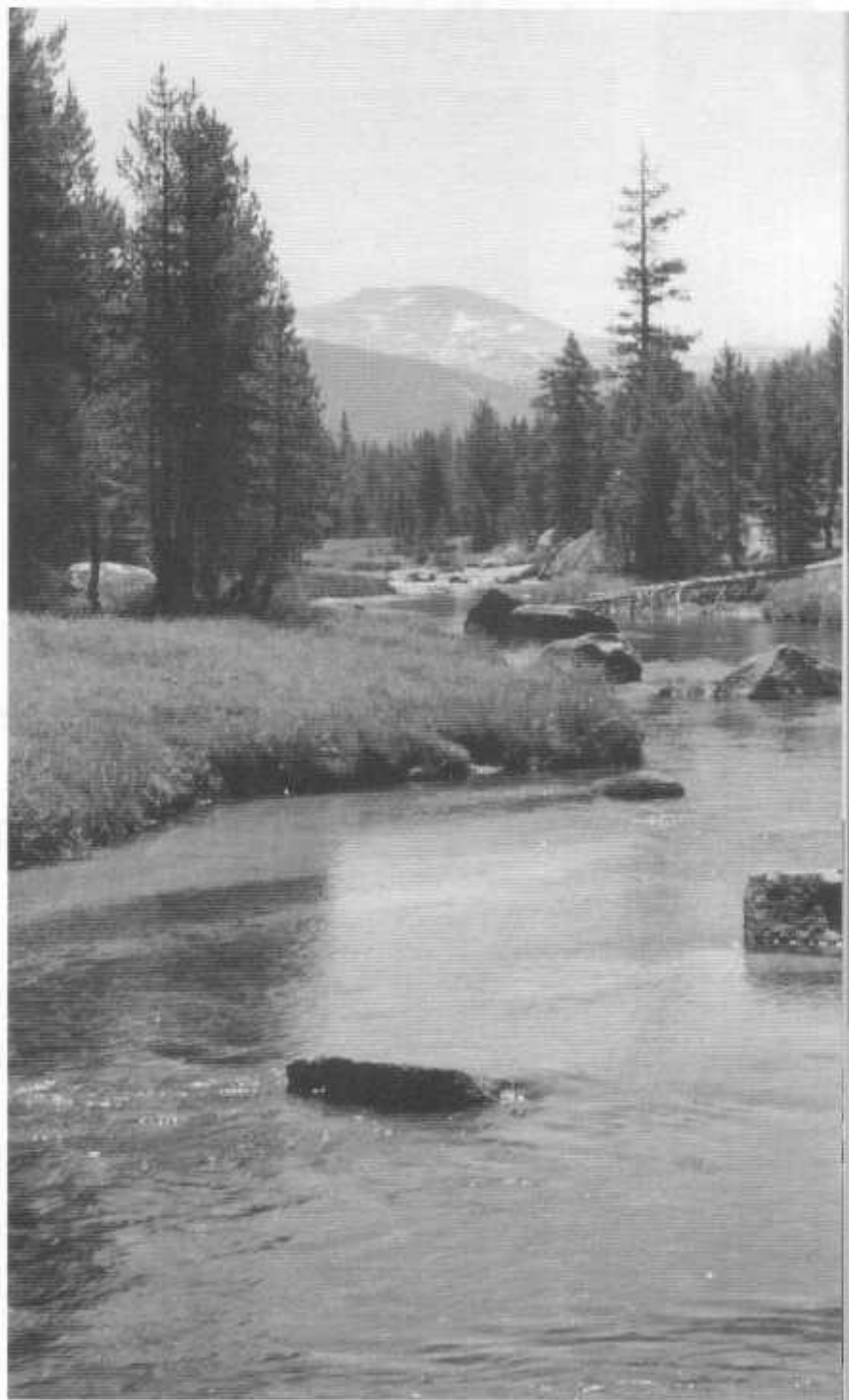
13. Saddlebag Lake and area. Another superlative area. Excellent views of the Conness Glacier, which is the easiest of the nearby ice fields to see at close hand. It rises above the Conness Lakes, milky-blue with glacier flour, one of the most strikingly picturesque of the many lake basins in this part of the Sierra. More than a dozen other lakes of various sizes are nestled in the area between North Peak and the Tioga Crest. As little or as much walking as you want.

14. Walk down meadow to Dana Fork from Tioga Pass. This one is a fine invitation to explore the high meadowland just below timberline. At least 25 small glacial tarns lie in these meadows and, together with their connecting streams and adjacent wildflower gardens, form a perfect picture of "Springtime in August." Eight miles.

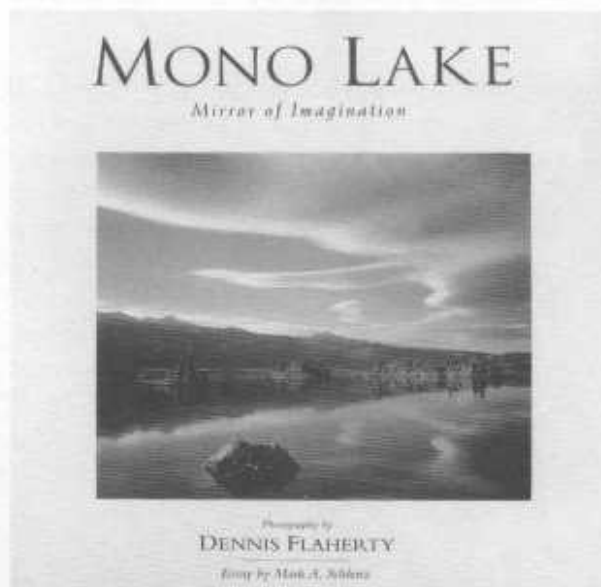
15. Tioga Pass Lakes. Park at the ranger station at the entrance gate. Stroll across meadows into sparse woods at the base of Lying Head (Mt. Dana). Many lakes and tarns abound among hillocks and trees, hidden from the highway. One mile.

16. Glacier Canyon. With its high, upland meadows, its fine big creek, the impressive terminal moraines of the receding Dana Glacier, the milky-blue of the peak of Mt. Dana at the head of the canyon and the final climax of the Dana Glacier, this provides a trip well remembered and inviting the hiker to return often. The great Dana Plateau to the east of the canyon is easy to get to and very rewarding in the breadth of its views and the richness of its alpine gardens. Three miles.

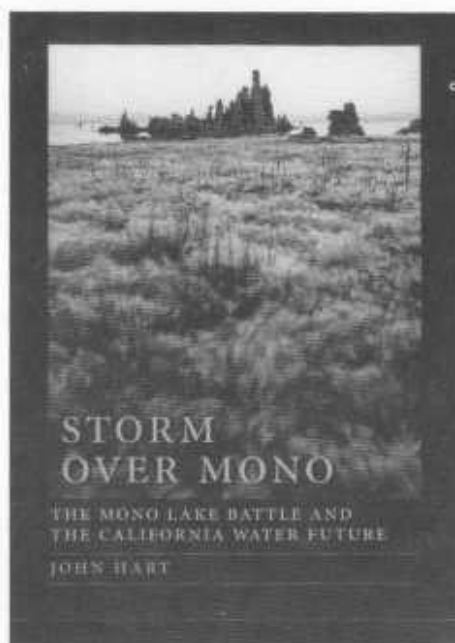
Martha Miller has been the Manager of the Tuolumne Meadows Lodge for more than 20 years. She knows Tuolumne Meadows like few others. This article originally appeared in the Yosemite Sentinel published by Yosemite Concession Services.



Richard C. Edwards



Mono Lake: Mirror of Imagination, photography by Dennis Flaherty, essay by Mark A. Schlenz (Santa Barbara: Companion Press, 1996; 96 p., \$29.95 cloth, \$19.95 paper)



Storm Over Mono: The Mono Lake Battle and the California Water Future, by John Hart (Berkeley: University of California Press, 1996; 211 p., photographs, maps, bibliography, index; \$50.00 cloth, \$29.95 paper.)

East of Yosemite National Park, in the rain shadow of the Sierra Nevada, is a lake of great importance to all Californians. Mono Lake has assumed this mantle of significance for a wide variety of reasons: scientific, cultural, scenic, legal, symbolic, and life-sustaining among them. Its waters, while too briny and alkaline for human consumption, support an enormous amount of wildlife, and the lake is an important link in the chain of stopovers and breeding grounds for birds along the Pacific Flyway.

Mono Lake has been the subject of an essay by Mark Twain and a quaternary history developed by nineteenth-century geologist Israel C. Russell. In 1981 Governor Jerry Brown signed a bill protecting the wildly unique tufa towers that ring the lakeshore, calling it the Mono Lake Tufa State Reserve. Three years later the federal government delimited 118,000 acres surrounding the lake and the reserve, including the Mono Craters to the south, and called the area the Mono-Basin National Forest Scenic Area; President Reagan approved the measure in September, 1984.

Meanwhile, years of legal wrangling and political maneuvering by representatives of the City of Los Angeles, National Audubon Society, Mono Lake

Committee, and various state and federal agencies has resulted in increased protection for the lake and reinforcement of various environmental protection laws.

The story of the lake's creation, its natural history, and the controversy that has surrounded it since the 1940s is the subject of these two fine works. Each book has a slightly different purpose. *Mono Lake: Mirror of Imagination* is a photographic tribute to the incredible beauty of this high desert region on the Sierra's eastern slope. There are many views contained within the glossy pages of this book that even longtime visitors to the region will find breathtaking. Over a period of years Dennis Flaherty has staked out the lake in all seasons in order to record the drama of light, shadow, rain, snow, sun and wind on this sometimes placid, sometimes violent body of water.

The book can serve as a travelogue, leading adventurous visitors to some of the more remote regions of the area. Flaherty ranges far afield to record some of the outstanding features of the basin, including the Mono Craters, the aspen groves of Lundy and Lee Vining canyons, the expansive Jeffrey pine forest to the south and the ghost town of Bodie to the north. The accompa-

nying essay by Mark Schlenz is a combination of poetry, history, and politics. He deftly tells the story of the lake's geological history, the utilization of its resources by humans over the past several thousand years, its description as recorded by early visitors, and the struggle over water rights with the City of Los Angeles.

Following the State Water Resources Control Board's September, 1994, order increasing the lake's water level to 6,392 feet above sea level, Schlenz penned a thoughtful and personal essay called "Healing the Waters." He writes, "the Mono Basin provides an almost ideal living laboratory for the ecological imagination. Here natural processes dramatically define the environment; here human influences upon those processes are distinctly drawn. Here I imagine a healing of more than Mono's lakes and streams; here I imagine a healing of our human souls as well." (p. 43).

John Hart's *Storm Over Mono* is truly a volume for the dedicated Monophile. His mission is to convey the entire story of the basin's history, concentrating on the diversion of water from the streams that feed Mono Lake for Los Angeles. The long, complicated, and very expensive legal battles that ensued when a determined band of biologists resolved to "Save Mono Lake" make up the bulk of the book. There are several sidebars that discuss some of the most important players in the drawn-out drama.

This is a complex story that Hart manages to tell with clarity and completeness. He presents all sides of the issues, including those of the Los Angeles Department of Water and Power, California Department of Fish and Game, National Audubon Society, Mono Lake Committee, local residents, state lawmakers, and the courts. Hart interviewed scores of lawyers, scientists, and activists and recorded their ideas and outlooks in an accurate and objective fashion. In his text he juxtaposes their positions, thereby revealing their areas of agreement as well as their differences.

The shifts in societal values and perceptions, as well as interpretations of law that occurred over a fifty year period is an integral part of understanding the story. Mono Lake went from a remote, little-visited and virtually unknown body of water to a destination point for thousands of visitors a year. It also became the subject of front page articles and editorials in the state's largest and most influential newspapers. The delicate balance that was finally achieved in September, 1994, was mutually accepted by all parties, an almost unheard of convergence

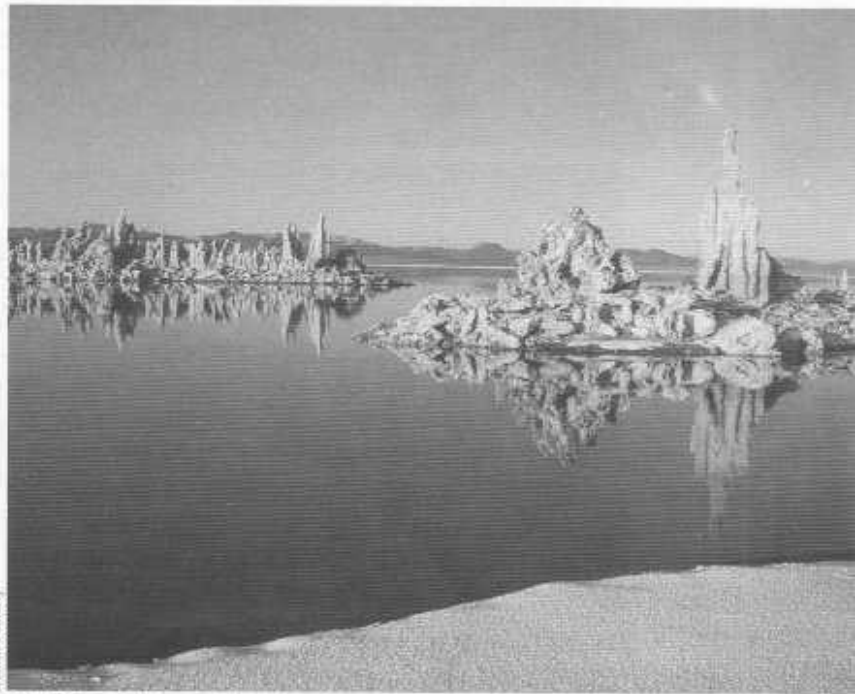
of opinion on a decision that effects so many people and resources.

Hart's book is illustrated with stunning color photographs, as well as a series of portraits by photographer Gerda S. Mathan that depict some of the characters of the story.

These books can increase one's knowledge of the human and natural history of Mono Lake, expand an appreciation for the beauty of the Eastern Sierra and Great Basin, and better inform the reader of the protracted legal battles that resulted in both the preservation of Mono Basin as well as a portion of Los Angeles' right to water from the streams that feed Mono Lake.

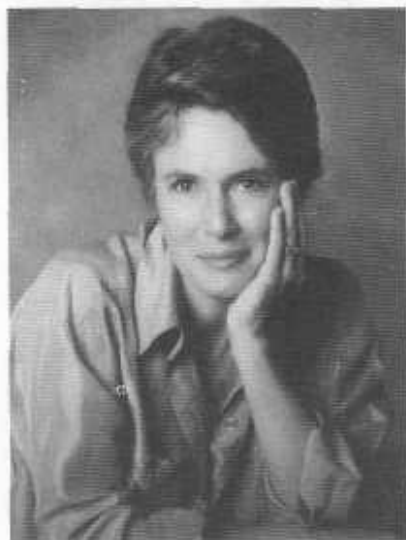
Robert C. Pavlik is a historian for the California Department of Transportation in San Luis Obispo. He worked for several years in Yosemite on historical research projects for the NPS, and has contributed regularly to this journal.

To order either of these books, use the form on page 17.



Tufa Towers, Mono Lake

Mystery Writer Nevada Barr to Speak at September Meeting



YA Members will gather on Saturday, September 13 in Tuolumne Meadows for the 22nd Annual Members' Meeting. The day will include the usual line-up of walks, lunch, meeting, and a raffle during the wine and cheese hour.

Nevada Barr, entertaining mystery writer and park ranger, will be the featured speaker this year. After eighteen years in the theatre, Ms. Barr became

interested in the environmental movement and began working summers in the national parks: Isle Royale in Michigan, Guadalupe Mountains in Texas, then Mesa Verde in Colorado, and finally Natchez Trace Parkway in Mississippi. *The Anna Pigeon mystery series*, featuring a female park ranger, developed from her love of the wilderness and her talent for storytelling and writing.

The first in that series, *Track of the Cat*, set in West Texas, won both the Agatha and Anthony awards for best first mystery. *A Superior Death*, based loosely on her experience as a boat patrol ranger on Isle Royale in Lake Superior, was published in 1994. *Ill Wind* took place in Mesa Verde, Colorado where she worked for two seasons, and *Firestorm* was set in Lassen Volcanic National Park.

Her most recent book is *Endangered Species*, which is set on the Cumberland Island off the coast of Georgia, and a sixth in the series, a story that unfolds in Lechuguilla Caverns of Carlsbad Caverns National Park, is due out in March of 1998. Praised by the *New York Times Book*

Review for a "naturalist's eye for detail and an environmentalist's fury at the destruction of the wilderness and its creatures," Ms. Barr was recently flown to Paris to accept the prestigious French National Crime Prize.

Check-in (to pick up nametags and lunch tickets) will take place between 10:30 a.m. and noon on Saturday in front of the Tuolumne Meadows Lodge. At noon, a spaghetti lunch will be served near the Lodge. Nevada Barr will speak at the Members' Meeting held in that same area beginning at 1:30 p.m. After the meeting, there will be a wine and cheese hour and a raffle. During that time, Ms. Barr will be available for booksigning and talk.

Details on the meeting and weekend were mailed to members in July. There is always a greater demand for accommodations than there is space available at Tuolumne Meadows, but other lodging is available inside and outside the park. For suggestions or other questions, please call Holly or Connie at the YA office (209/379-2317).

Association Dates

September 13, 1997
22nd Annual Meeting, Tuolumne Meadows

October 5-11, 1997
Work Trip in Yosemite Valley

March 28, 1998
Spring Forum, Yosemite Valley

September 12, 1998:
23rd Annual Meeting, Wawona

Y.A. Web Site Wins Award

Yosemite Online, the Yosemite Association's web site on the Internet, was recently named a "Best of the Web" site by the editors of CNET: The Computer Network. Each week, CNET's experts review must-see sites, and their comments about Yosemite Online were quite flattering. Among the adjectives used were "gorgeous" and "spectacular."

Yosemite Online can be found on the World Wide Web at: <http://yosemite.org>. We welcome the ideas of our members for making it a better and more useful site.

209/379-2317

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

Fall Seminars Still Available!

For those seeking an educational adventure in Yosemite, there's still room in the following fall Yosemite Association outdoor seminars:

Art and Writing Courses

October 18-19, Yosemite in Pastel, Moira Donohoe

October 24-26, Yosemite - Alive With Poetry, Kristina Rylands

Botany Courses

October 17-19, Fall Botany in Yosemite, Glenn Keator

History Courses

September 20, View From a Stagecoach, Jessica Daskal

October 4-5, California Indian Material Culture for Elementary School Teachers, Bob Fry

October 11, Yosemite Valley History Walk, Stan Hutchinson

October 12, Wawona, Gem of the Sierra, Stan Hutchinson

Photography Courses

October 3-5, Women's Fall Photography in the Eastern Sierra, Annette Bottaro-Walklet

October 10-12, Autumn Light Photography Workshop, Dave Wyman

October 31 to November 2, The Silver Image of Yosemite Valley, Geir and Kate Jordahl

For more information about these classes including costs, call or write Yosemite Field Seminars, (209) 379-2321, P.O. Box 230, El Portal, CA 95318.

Yosemite National Park Announces Change to Entrance Fee Policy

Yosemite National Park Acting Superintendent Stanley Albright announced a change in the entrance fee structure to begin Friday, August 1, 1997. The amended fee policy is a result of concerns voiced by Congressman John Doolittle (R-Rocklin) and the unusual circumstances created by the severe flooding in early January.

The amended fee structure applies only to non-recreational trans-Sierra travel through Yosemite on the Tioga Road (Highway 120). Although the National Park Service does not encourage using park roads for through traffic, the Tioga Road is the fastest way to traverse the Sierra Nevada. This change in policy is intended to accommodate those local travelers who are utilizing the Tioga Road as a means of crossing the Sierra Nevada rather than as a recreational visit to Yosemite National Park.

Vehicles must enter or exit the park through the Tioga Pass entrance on the Tioga Road (Highway 120 East). The traverse of the Sierra Nevada can be used with the Big Oak Flat Road (Highway 120 West), the El Portal Road (Highway 140), or the Wawona Road (Highway 41).

Vehicles using the Highways 120 or 140 entrances must complete the traverse within two hours. Vehicles using the Highway 41 entrance must complete the traverse within three hours.

Upon entering the park, non-recreational users will pay a \$5.00 fee and be issued a time-imprinted receipt. If the vehicle remains in park beyond the allotted time, the remaining \$15.00 of the \$20.00 entrance fee will be collected upon leaving the park.

Since January 1, 1997, Yosemite has been a part of the Federal Fee Demonstration Program. This three year trial program raised fees in approximately 100 national parks. Eighty percent of the fee increase remains in the park for infrastructure improvements. Yosemite's entrance fee was raised from \$5.00 to \$20.00 per vehicle for a visit up to seven days. Due to flooding in early January, the \$20.00 entrance fee was not collected until March 14 when Yosemite Valley reopened.

El Portal Road Improvement to Begin in December

Construction on the El Portal Road, that portion of Highway 140 inside Yosemite National Park, will not begin any sooner than December 1, 1997. The construction period was originally anticipated to begin October 1, 1997. No construction will occur between December 20, 1997 and January 4, 1998 to allow for unrestricted vehicle access throughout the holiday period.

According to the Draft Environmental Assessment on El Portal Road Improvements, access over the El Portal Road in and out of Yosemite Valley will be limited once permanent repairs begin. A proposed access schedule will be announced in conjunction with the release of a project decision. This decision will consider public comments received and is expected by the end of August 1997. A final long-term access schedule will be announced following contract negotiations in late October. The negotiated access schedule may provide some increased access hours but will not be more restrictive than the proposed schedule.

The Draft Environmental Assessment on El Portal Road Improvements was available for public review and comment from April 15 through June 16, 1997.

HAMMERING OUT YOSEMITE'S HISTORY

BY GENE ROSE



The future of Yosemite and other crown jewel parks could well depend on a new era of volunteerism and stewardship, many national parks observers believe.

Take the case of Jerry Coe. Twenty years ago, the young Fresno student worked as a seasonal interpreter at the Pioneer Yosemite History Center at Wawona, serving alongside another interpreter by the name of Dean Shenk.

"We had a paid staff of twelve seasonal interpreters with all kinds of living history program for the visitors. One of the staff then was Dean Shenk. Today the staff is Dean and Burrell Maier, the stagecoach driver," Coe said.

"That's not the way we should be treating visitors to our national parks."

The reason for the drastic curtailment in park interpretation has been repeated many times over: increased visitation and decreased funding that only seems to get worse.

Re-enters Jerry Coe, these days a blacksmith who pounds out decorative iron work at his Berkeley forge, but still keenly interested in the park.

Working with about a dozen members of the California Blacksmith Association, Coe has brought along a unique program that has returned a measure of interpretation to the history center.

During the summer season, each blacksmith devotes a week apiece at the blacksmith forge at Wawona, hammering out a forgotten page of history.

One of the blacksmiths described their new role as another dimension of the modern day trend toward "job sharing"—only this one involves volunteering.

"There was no way I or any of my friends could afford to spend the entire summer as a volunteer in the park. But each of us can donate a week, and in that way we have managed to hold onto this program," Coe explained.

Dean Shenk, who now supervises the history center said volunteer blacksmiths have enabled the park service to maintain a portion of their living history program at the Yosemite History Center.

Last summer the history center had a paid staff of one and nine volunteers, plus a blacksmith. This year the staff is two paid and three volunteers, plus a blacksmith.

For their week in the park, the volunteers get housing and six dollars a day.

During their involvement, the individual blacksmiths craft various small items of their own choosing and turn them over to the Yosemite Association for sale at their Wawona outlet.

The living history approach has other benefits for the blacksmiths as well. It not only helps them preserve the craft, but it recognizes the smith's important role in opening Yosemite to visitors.

The blacksmith's page of living history is now in its third year.

"I would like to expand this to include bakers, woodworkers, saddlemakers, rakemakers, and practitioners of other crafts that were part of the early Wawona scene... so that this important history will not be lost," said Coe.

"There is a lot of maintenance of park facilities that is not being done. Why can't we find people with those skills and bring them to help the park?"

Under park rules volunteers are forbidden to replace paid NPS staff members; however, the reality of the situation has brought increased demand for such volunteers through a program known as Volunteers in the Park.

Currently the Yosemite Association pays for about twenty-two interns. Of that number, thirteen work in interpretation, eight in wilderness management, and one in other park-related employment.

In early June, Coe and about thirty friends of the park gathered for a weekend at the pioneer center for a training, looking at ways they might improve the living history program.

But the June training session was not all work. The blacksmiths managed to pick up a few pointers from Yosemite's premier basketmaker, Julia Parker, who spoke of the spirit and skills of her art.

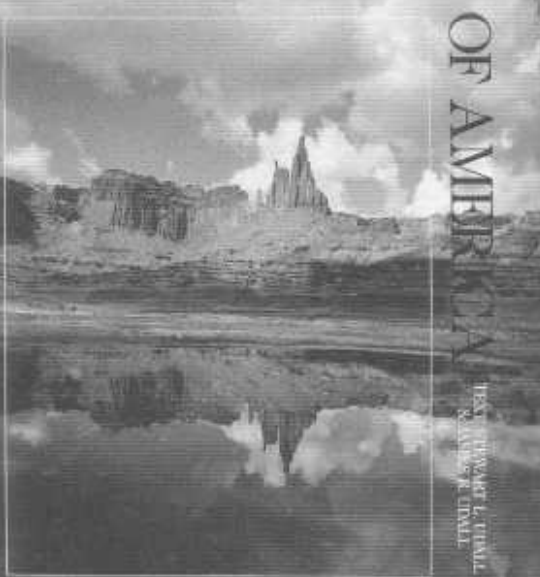
In addition, the smiths practiced their culinary craft, laying down their hammers and forges to whip up goodies in the kitchen of the old Hodgdon cabin. Following the evening speakers, the group participated in an old time barn dance at the Wawona barn. The evening activities concluded with a little star gazing with Dr. Peter Franz, an astronomer, pointing the way through the firmament.

Coe says he hopes to form a non-profit organization to be known as Friends of Wawona that will help the National Park Service to expand their interpretation program in that area of the park.

Gene Rose worked as a reporter for the Fresno Bee for many years. He is a long-time Y.A. member, enjoying his retirement and many new writing projects.

NATIONAL PARKS

OF AMERICA
WITH PHOTOGRAPHY BY DAVID MUENCH AND AN ESSAY BY STEWART L. UDALL AND JAMES R. UDALL



DAVID MUENCH
PHOTOGRAPHY

YOSEMITE CATALOG

25086 National Parks of America

with photography by David Muench and an essay by Stewart L. Udall and James R. Udall.

Here is a large-format photographic study of thirty-three of America's most beautiful national parks. From the Grand Canyon to Isle Royale, and from the Everglades to Glacier National Park, the subjects of the images are some of our country's most precious national resources. Arranged as a park-by-park tour, the book provides new vantage points on familiar scenes through Muench's masterful photography.

Stewart Udall and James Udall, avid environmentalists, provide insightful text, but it is the photographs themselves that speak most eloquently. This coffee table style book is 10" x 13" in size, 224 pages, Graphic Arts Center, 1996. Hard cover, \$50.00

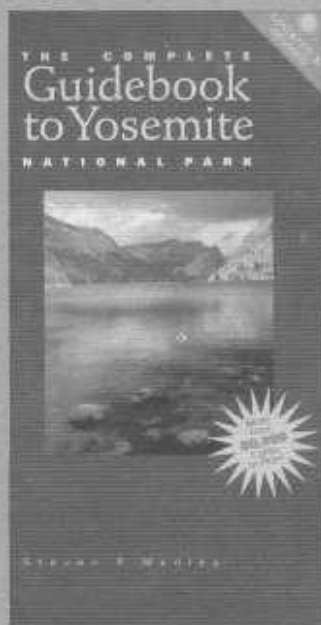
00360 The Complete Guidebook to Yosemite National Park—Revised Third Edition

by Steven P. Medley.

A perennial best-seller for the Yosemite Association, this award-winning title (named "Best National Park Guidebook" in the National Park Service publication competition) has been completely revised and updated for 1997. With the release of the third edition, there are now over 80,000 copies of the guide in print.

The goal of the work is to provide coverage of every aspect of Yosemite in a single volume. Because the park's major concessioner has been replaced, many changes were made to the guide to reflect new phone numbers, facility names, altered addresses, and other revisions. It also includes a loose-leaf supplement with facts about the impact of the park flooding of earlier this year.

Informative and very useful, the guidebook features things to do and see, provides reservation information, lists hiking trails and backpacking tips, and boasts many maps and illustrations. And where else can you find valuable lists like "The Ten Best Named Climbs Using Body Parts in Their Titles"? 112 pages, maps and illustrations, Yosemite Association, 1997. Paper, \$9.95



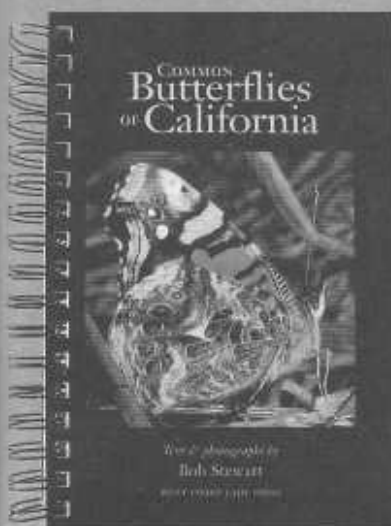
16209 The Common Butterflies of California

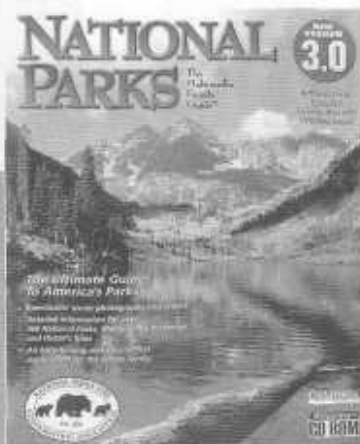
with text and photos by Bob Stewart.

This is a self-published guide for those interested in identifying butterflies without killing them or catching them in a net. To help beginners and those who rely on binoculars to watch butterflies, the book includes photographs that show the patterns on both the under wing and upper wing. And to simplify matters, the author has included only common species, omitting similar-appearing butterflies that are not likely to be seen in California.

The guide is organized by families, and for each species considerable information is provided in a consistent format so that quick comparisons can be made. Besides common and scientific names, categories include key field marks, size, adult flight dates, hibernation data, host plants, range, and notes.

Illustrated with 127 full-page color photographs that are six by nine inches in size, and wire-o bound for use in the field, this is a valuable guide for butterfly enthusiasts with all levels of experience. 260 pages, West Coast Lady Press, 1997. Spiral wire binding, \$24.00.





13900 National Parks—The Multimedia Family Guide (Version 3.0)

by Cambrix Publishing.

This is a comprehensive multimedia guide to America's national parks in CD-ROM format. Over 360 parks are featured using photographs (over 900 in all), slide shows, maps, travel information, and historic videos. Specific information is provided for the different parks including

camping, reservations, visitor centers, museums, lodging, dining, medical services, accessibility, and more.

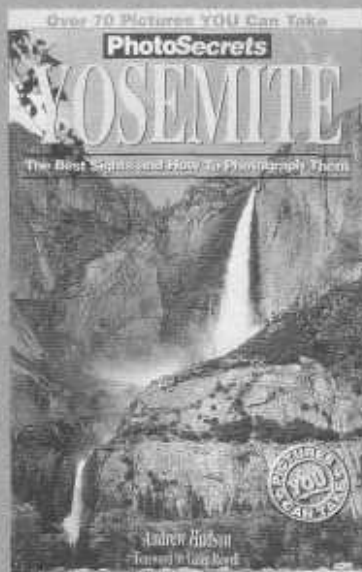
Other features are a guide to the animals and plants that inhabit the national parks, and an interactive timeline history of the National Park Service. Information is based on resources provided by the National Parks and Conservation Association, and has been updated for 1997. There's even a listing of national park-related sites on the World Wide Web. CD-ROM, Cambrix Publishing, 1997. Windows CD-ROM, \$29.95

27350

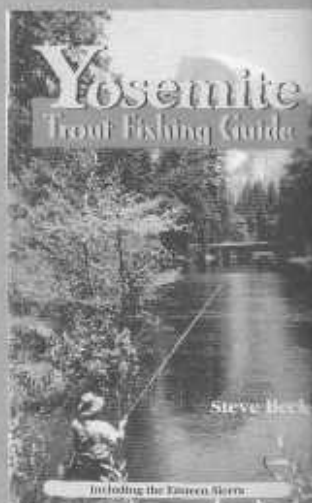
PhotoSecrets Yosemite—The Best Sights and How to Photograph Them

by Andrew Hudson.

In this full-color guide, maps and text show where, when, and how to photograph many of the classic Yosemite views. Most (probably 90%) of the coverage is for Yosemite Valley, but that coverage is very thorough. For each viewpoint extensive data is provided, including quotes, best times of the day and year to shoot, and ideas for sunset images.



Besides an overall map for Yosemite Valley, there are smaller maps for each location, and multiple color images. General topics include the top ten sights, photographing Yosemite in a day, getting around, equipment and accessories, photo tours, and when to visit. 72 pages. PhotoSecrets Publishing, 1997. Paperback, \$7.95



36600 Yosemite Trout Fishing Guide (including the Eastern Sierra)

by Steve Beck.

This book offers comprehensive coverage of the area in around Yosemite National Park from a fishing perspective. With 1,361 miles of rivers and creeks and 318 lakes, Yosemite

has a lot to cover (40% of these bodies of water contain trout). The author provides general information, then discusses the various regions of Yosemite and the east side of the Sierra, detailing the types of trout to be caught, where to find them, and how to fish for them.

There are numerous maps, fishing and hiking tips, and Sierra bug fly tying instructions. The author suggests that even though the fishing in the park is not world famous, it can still be rewarding. This is truly a bible for anglers in quest of Yosemite trout. 160 pages, Frank Amato Publications, 1996. Paperback, \$14.95



12050 Pajaro Field Bag

This newly developed waist pack features seven pockets for everything you'll need when you're hiking or enjoying time in the outdoors. The main pocket is sized to accommodate field guides, travel books, or binoculars, there are smaller pockets (including one with a zipper) for note pads and maps, and specialized pockets for pencils, pens, and sunglasses. Best of all, a secret pocket sealed with Velcro keeps keys, credit cards, and other valuables safe. It's the best such pack we've found. Made in the U.S.A. of durable Cordura in forest green and black by Pajaro. \$29.95

**07516 Yosemite Association Patch**

Our Association logo is embroidered on colorful, sturdy fabric for placement on daypacks, shirts, blue jeans, jackets, or wherever! The newly-designed patch

is available in three attractive colors: dark blue, forest green, and maroon. \$3.00 (please specify color)

**07800 Yosemite Wilderness Pin**

Here's a beautiful enamel pin commemorating Yosemite's unparalleled wilderness. It's circular in shape with a high country scene rendered in blues, grays, and greens. A real treasure for collectors. Approximately 1 inch in diameter. \$4.00

07510 Yosemite Association Mug

This distinctive and functional heavy ceramic mug feels good with your hand wrapped around it. Available in two colors (green and maroon), it's imprinted with our logo and name in black and white. Holds 12 ounces of your favorite beverage. \$6.50 (please specify color)

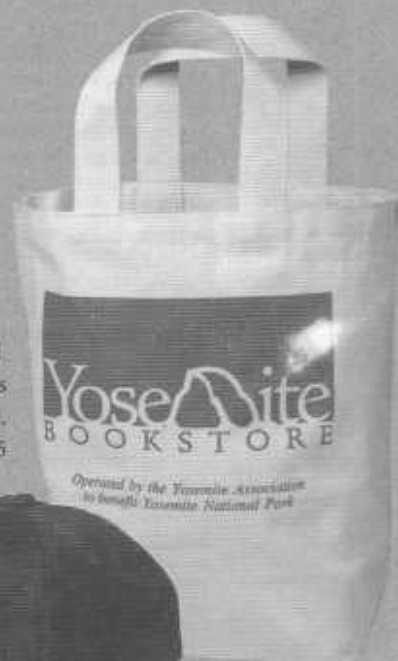
**400 Sierra Nevada Field Card Set**

Illustrated by Elizabeth Morales

These handy field identification cards depict the most commonly seen birds, mammals, trees, and wildflowers from the Sierra Nevada region. Illustrated with color drawings and including information about the size, habitat, and other field marks of each, the cards are unbreakable, waterproof vinyl plastic and fit conveniently in one's daypack or glove compartment. Particularly helpful for newcomers to the Sierra as regularly observed flora and fauna can be quickly identified. Four plastic cards printed on both sides, Yosemite Association, 1991 and 1995. \$11.00

**07720 Yosemite Bookstore Book Bag**

Conserve resources with YA's handy book bag made from durable 100% cotton fabric with a sturdy web handle. Cream-colored, it's imprinted in blue with the Yosemite Bookstore logo. Fine craftsmanship and generous oversized design make this a bag you'll want to take everywhere. Approximately 17 x 16 inches. \$8.95

**07505 Yosemite Association Baseball-Style Cap**

Our YA caps are made of corduroy with an adjustable strap at the back so that one size fits all. The cap is adorned with a YA logo patch, and comes in dark blue, forest green and maroon colors. The cap is stylish and comfortable, and wearing it is a good way to demonstrate your support for Yosemite. \$9.95 (please specify color)

**Order Form**

Credit card orders call: (209) 379-2648 Monday-Friday, 8:30am-4:30pm

Item#	Qty.	Color	Description	Price Each	Total
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2					
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 Less 15% Member's Discount: _____
SUBTOTAL A: _____
 7.25% Sales Tax (CA customers only): _____
 Shipping Charges: \$3.95
TOTAL ENCLOSED: _____

Yosemite Association, P.O. Box 230, El Portal, CA 95318

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