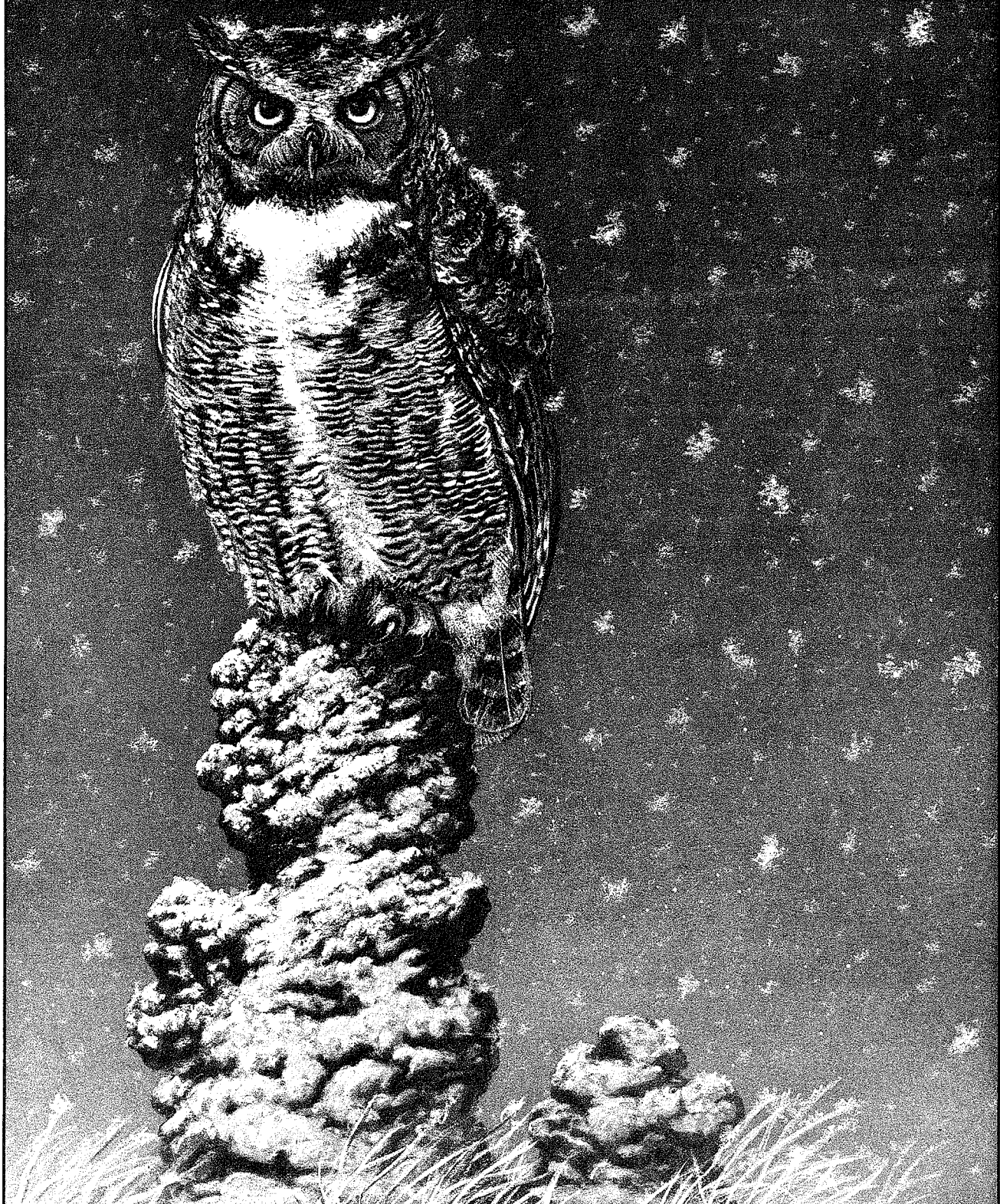


Winter 1989

Vol. 11, No. 3

# MONO the LAKE

## NEWSLETTER



Carl Dennis Buell

## On The Cover

One of our favorite artists, Carl Dennis Buell, created this intriguing picture of a Mono Basin Great Horned Owl. These owls mate in mid-winter while the creeks are still full of ice and the constellation of Orion rides high in the sky. Even on the coldest nights, their sonorous hoots drift along the stream channels and down from the Sierra slopes into the sleepy town of Lee Vining. Thank you, Carl, for portraying the shadowy spirit of our winter owls so well.

## Comments on Scenic Area Plan Prolific

By the January 19 deadline, the Inyo National Forest had received approximately 2,500 responses to their draft Mono Basin Scenic Area Management Plan and Environmental Impact Statement. The public comment period was quite successful and the Forest Service is pleased with the response. Comments supporting the Forest Service's proposed lake levels came from the California Department of Fish and Game, L.A. City Council members Mike Woo and Ruth Galanter, and L.A. County District Attorney Ira Reiner, among others.

The next step for the Forest Service is to analyze all the responses and pull out the key issues. These issues will be taken to the Scenic Area Advisory Board, a group of government, agency, and local community representatives, for resolution. Then the Forest Service team will rewrite the EIS, incorporating new information and corrections, and creating a new alternative, if needed. They hope the Final Plan will be released by autumn, 1989.

The Mono Lake Committee sends a **big thank you** to all of our members who wrote comments supporting the lake level proposals and the Amenities alternative. We really appreciate your help and interest in the Scenic Area.

**THE MONO LAKE COMMITTEE** is a non-profit citizen's group dedicated to saving Mono Lake from the excessive diversion of water from its tributary streams. We seek a compromise that will meet the real water needs of Los Angeles and leave our children a living, healthy and beautiful lake.

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This newsletter is partially funded by a grant from the *Mono Lake Foundation*, a non-profit, tax-exempt organization dedicated to studying and protecting the Mono Lake watershed. If you wish to make a tax deductible contribution to the effort to save Mono Lake, please write your check to the "Mono Lake Foundation."

## Eastern Sierra Water Symposium

Water is the primary natural resource of Mono and Inyo counties. Water export is a common concern. The future of Mono Lake and the Owens Valley will be determined by decisions made within the next year regarding water management.

The involvement of an informed public in those decisions is important. It's so important that both Mono and Inyo counties' Boards of Supervisors have joined with the Mono Lake Committee, the Bristlecone Chapter of the California Native Plant Society, the Eastern Sierra Audubon Society, the Owens Valley Committee, and the Toiyabe Chapter of the Sierra Club in sponsoring an all-day Eastern Sierra Water Symposium. This will be held on Saturday, February 4, 1989, at the Bishop High School auditorium at 8:45 a.m.

The symposium promises to be an informative, balanced presentation of the area's significant water issues. The program will feature respected speakers from the Eastern Sierra and elsewhere in California to address water management in the Eastern Sierra, vegetation and hydrological studies, state water laws applicable to Mono and Inyo counties, water-related environmental considerations, and Southern California's water needs.

Admission is free, and no prior registration is required. For more information, contact Leah Kirk, Eastern Sierra Water Symposium, P.O. Box 263, Independence, CA 93526, or call (619) 878-2222.

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## Saunters by Mono Lake



I have a friend, Gioia Timpanelli, who is a storyteller. Whenever she recounts a story from her own familial tradition of Sicily she ends the tale with a line to the effect, "...and so they lived happily ever after—but here we are, holding our knees and sucking our teeth." Since I'm not Sicilian, Gioia had to explain to me that the phrase was the storyteller's way of bringing the audience back to the present, which in old Sicily had often meant the listeners were cold (holding our knees) and hungry (sucking our teeth).

Gioia's saying entered by mind a few weeks ago when I returned from visiting my family in Southern California. I left the green lawns and blooming begonias, passed the hills covered with newly sprouted grasses and mustards, climbed the San Bernardino mountains into the high desert still clothed in winter brown and entered the snow just north of Lone Pine in the Owens Valley. Since then the world has been cold and white. The juncos at our birdfeeder "hold their knees" by fluffing downy feathers until their legs disappear. For the animals, cold and hunger define winter in the Mono Basin.

After a recent snowstorm I got up early and skied down to the lake. I didn't really expect to see any wildlife in the chill and whiteness. The rhythm of my skis and breath filled the open sky. Soon I came upon fresh coyote tracks. I followed them on their morning excursion. The tracks went to the creek, then started down a side road, turned and came back, investigated a rabbit hole but ignored the extensive hare tracks among the brush. The coyote left a tuft of fur floating in the path. I held it to my cheek to feel the guard hairs and soft undercoat. It smelled faintly sweet and musky.

The tracks meandered by an old poplar tree that was surrounded by the tiny bodies of dead and dying honey bees. I followed what I guessed were weasel prints around the trunk to a hole at its base. The tree sounded as though hundreds of tiny motorcycles were racing inside. Out of the hole tumbled bees that seemed weak and disoriented. I wondered if the weasel might still be inside raiding the hive. Then I found a place where the tracks scampered out onto the open snow, stopped and suddenly disappeared leaving no visible means of escape except by air. Eagle? Hawk? Yet there were no

imprints left by talons or wings. Perhaps the weasel had leaped and dove into the snow at the base of a sagebrush.

Continuing in the coyote's tracks to the east, I reached the windblown shore. Along an old driftwood line I came upon raven tracks winding through the scattered wood. Following the footprints I realized that the ravens had moved each stick in the hope of finding insects beneath. Even large pieces of wood had been shifted, perhaps with the help of several birds.

I became fascinated with the patterns left by the ravens around each bit of flotsam and took many pictures, wondering if I could convey the sense of grace expressed in the sand and snow. After a mile of watching the remnants of the birds' foraging, I felt such empathy for their lives. The alkali bleached driftwood piles were not a vision of plenty. Gulls, grebes, phalaropes and hummingbirds all had gone south. The ravens were left, turning over weathered sticks, sucking the teeth of winter.

*Lauren Davis*





# Way Back—The First Ten Years

*From Creamed Tuna to the Supreme Court*

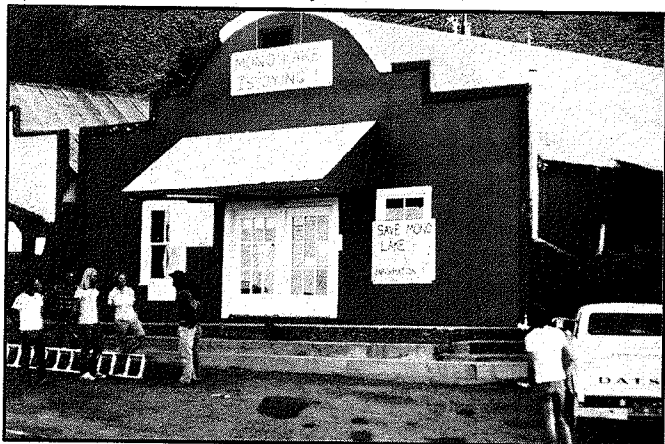
1988 marked the Mono Lake Committee's tenth anniversary. So much has happened in our first decade, but I will summarize briefly those years for the new members and bring back memories for the old-timers. For brevity and consistency, I'll not mention the names of the many people who chipped in along the way. They all deserve credit, no matter how short or long their commitment, but since Dave and I "started the company" we couldn't bail out.

MLC didn't spring full grown from the half-shell. We wish it had. Imagine a bunch of scruffy biologists reluctantly sitting around on the 40th floor of the Morrison and Foerster law offices trying to appear alert and interested in the fine points between nonprofit status 501 (c) 3 and 501 (c) 4.

Fifteen years ago Dave Gaines had a small contract to inventory Mono County's natural areas. I tagged along as we explored the Mono Basin. Dave had known of Mono Lake from childhood vacations, but fell in love with the watershed as an adult biologist.

The next year, as a teaching assistant at Stanford, Dave sparked interest in Mono Lake among the students. They teamed up with friends at UC Davis to write and earn a National Science Foundation grant to study the lake ecosystem. So, in the summer of 1976, they gathered gear and set off to a sagebrush camp overlooking the lake. There was a specialist in each pertinent field. Their findings are published in *An Ecological Study of Mono Lake, California*, which documented, among other things, the extraordinary numbers of migratory birds using the lake, and the islands' importance to the nesting gulls. The study also chronicled for the first time the elegantly simple ecosystem on which over a million birds depend and the damage DWP's water diversions were inflicting on the lake habitat. All the salient points that the MLC depends on to defend the lake came from this early study.

Once we realized what would be lost if the lake died, it became a moral dilemma. How could we in good conscience stand by and not try to save it?



Summer 1979: MLC moves into the old Hess Dance Hall in Lee Vining.

That is how a group of idealistic biologists started a single-issue organization. Our policy was to be honest and ask for what we really wanted, not to ask for the sky and then compromise down to a realistic goal. We decided on a three-part plan of action: legal, legislative, and educational.



MLC Summer Staff and Interns, 1982: Top, left to right: Sally Gaines, Jim, Liz and Misha Marotta-Jaenecke, Marty O'Malley (visiting from San Francisco). Bottom: David Gaines, Jasmine Marotta-Jaenecke, Janice Enns and Debbie Jewett.

## LEGAL ACTION

We were fortunate that among our friends was a brilliant legal scholar. He was convinced that the Public Trust Doctrine could be the basis for an effective lawsuit. This doctrine asserts that the state of California must protect navigable bodies of water and related resources as far as feasible for the people of the state. We estimated that we could win the case in two to three years. What innocents we were!

Although it's been nine years since we filed, we've made significant headway on the Public Trust case. In 1983, the Public Trust theory was upheld by the California Supreme Court. Five years later, the federal court dismissed the case and remanded it to state court, where we started, but at least the ball's rolling.

After several wet winters set Rush and Lee Vining Creeks flowing once again, trout became reestablished. In 1985, Cal Trout led, and we joined, a successful legal fight to get a temporary minimum flow in Rush Creek. The next year we accomplished the same for Lee Vining Creek. Long Live the Trout!

Last year, the Third District Court of Appeals ruled that DWP's water licenses on these creeks were illegal and need to be reviewed by the State Water Resources Control Board. DWP has been granted a rehearing. Meanwhile, the creeks continue to flow.

## LEGISLATIVE EFFORTS

We soon realized that legal battles were only one way to play the environmental protection game. In 1979, the Interagency Mono Lake Task Force recommended saving the lake via water conservation. We tried to get the plan signed into law and spent many days lobbying in the State Capital. During a rehash of a late night/early morning legislative hearing I found myself for the first and probably last time in a Sacramento bar at two a.m., closing time. Gee, they sure put a lot of ice in my 7-Up.

Discouraged but undaunted, we tried another approach. We succeeded, with our congressman's help, in getting the California legislature to create the Mono Lake Tufa State Reserve in 1982. Two years later, Congress recognized the area's unique scenic and natural qualities by creating the Mono Basin National Forest Scenic Area. The expected opening date for their visitor center on the bluff northeast of Lee Vining is 1990.

In 1984, state and federal research bills allocated money to study Mono Lake's ecology. These two studies confirmed what researchers and MLC had been saying all along: DWP water diversions were destroying Mono Lake's ecosystem. The studies also forced DWP to concede that significant harm would occur to the lake if diversions continued unchanged. (Both the National Academy of Sciences and the Community and Organization Research Institute reports can be ordered from the MLC catalog.)

The Environmental Protection Agency is aware that the Mono Basin air quality has been degraded by blowing alkali dust. They have changed the classification of the area to allow for additional monitoring and study.

## GAINING GRASSROOTS SUPPORT

The state and national capitols have to be watchdogged vigilantly for bills that would harm Mono Lake. This hasn't been easy. Compared to DWP's legions of lobbyists, we've only had one person with one suit. Against odds like that we needed grassroots support. Without all of your letters and phone calls, we would have lost many a tangle.

Our first big challenge in gaining public support was overcoming the fact that in 1978 few people knew of Mono Lake. We launched a major publicity campaign of traveling slide shows to Audubon societies, the creamed-tuna circuit, schools, colleges, and anyone who would listen. Dave's speaking and debate skills were a real asset.

The blasting of the Negit landbridge in 1979 generated our first national TV and newspaper coverage. Since then crews from around the world have filmed at Mono Lake and articles on the lake have been included in every major magazine, such as *Sports Illustrated*, *Smithsonian*, and *National Geographic*.

We started a newsletter to inform our members. Because a printing press is crucial to any revolution, we imposed on a friend with a print shop. For several years the newsletters were typed, pasted up at home, then taken to the print shop on Sundays. We worked all day alongside the printer, went out for pizza (boy, did we agonize over

spending \$8 of donations for this expense), then kept working until we were finished.

Back at the lake, we offered free half-day field trips that included a canoe ride, buoyant, salty swims in the lake, and ended with a soak in the hot springs. These trips were designed to impress people with Mono's beauty and value to wildlife.

Our Mono Lake Visitor Center in Lee Vining started out funky and, for the most part, continues that way. But it is year-round headquarters to eight staff and numerous interns. Our original aims remain: have exhibits on the lake, inform the public, and sell Mono Lake merchandise. At a formative staff meeting, it was decided to keep to educational merchandise. Before long though, we had educational coffee mugs, hats and earrings. Oh well, it garners income to fund worthy projects. If fundraising goes as planned, we hope to buy the center soon, and refurbish it for visitor comfort and staff efficiency.

By 1984, 50,000 people were visiting the information center each year. People had heard about Mono Lake, came to see it and believed it was worth saving. Dave often said if he could get every person in LA up to see the lake, it would be saved. Each year brings more visitors, and supporters. In 1988, 80,000 people came to the center and 15,000 were MLC members.

For the past several years DWP and MLC have been sitting down together with a facilitator to explore solutions to the dilemma at Mono Lake. Currently, the informal discussions focus on alternative water and energy sources for DWP.

In 1988, MLC added a new award to the wall. President Reagan presented his "Take Pride in America" award to 94 US conservation groups. We are honored to be recognized for "outstanding public stewardship" by the President, as well as Governor Deukmejian and the Mono County Board of Supervisors.

This summary leaves out a lot of detail, but hopefully gives you the flavor of what we've been doing for the last decade. Thank you all for your fortitude and support. Please stay with us through the next years, the victory years.

Sally Gaines



MLC Summer Staff and Interns, 1984: Top, left to right: Katie Quinlan, Daria Walsh, Ilene Mandelbaum, Emily Harris, Beauty, Debbie Jewett. Bottom: Sarah Jewett, Sally Miller, John Whorff, Sally, Dave and Vireo Gaines. Missing was Jim Parker, who was leading a field trip.

## The Decade In Review

**1978.** David Gaines and friends organize the Mono Lake Committee.

**1979.** Seven-agency Task Force report recommends a compromise solution that Mono Lake's level be raised and maintained at 6388 feet.

**1980.** Mono Lake's plight is publicized worldwide through magazines including *Audubon*, *National Geographic*, *Smithsonian*, and *Life*.

**1981.** State of California establishes the Mono Lake Tufa State Reserve.

**1982.** Congress holds hearings at Mono Lake.

**1983.** California Supreme Court issues landmark Public Trust decision.

**1984.** Congress establishes the Mono Basin National Forest Scenic Area.

**1985.** Mono County Superior Court issues preliminary injunction requiring DWP to release 19 cubic feet per second (cfs) down Rush Creek into Mono Lake.

**1986.** Los Angeles Mayor Tom Bradley pledges support for Mono Lake's protection.

Mono County Superior Court issues preliminary injunction requiring DWP to release 4-5 cfs down Lee Vining Creek into Mono Lake.

**1987.** National Academy of Sciences releases study, "The Mono Lake Ecosystem: Effects of Changing Lake Level," predicting the collapse of Mono's ecosystem if diversions continue unchanged.

MLC and DWP co-sponsor an independent study of possible alternative, environmentally acceptable sources of water for replacing Mono Basin diversions.

U.C. Davis sponsors study, "An Economic Evaluation of Public Trust Resources of Mono Lake", documents strong statewide support for Mono Lake and willingness to pay for the lake's protection.

**1988.** For this year's story, please see below.

## 1988 In Review

**January.** MLC founder, David Gaines and Assistant Information Coordinator, Don Oberlin, are killed in a tragic auto accident. Over 300 friends gather at the lake's south shore for the memorial service. Executive director Martha Davis honored by L.A. Times as one of 88 people who will influence L.A.'s future.

**February.** Hundreds of Eared Grebes winter at Mono Lake, feeding on unusually large numbers of adult brine shrimp remaining in the lake.

**March.** The drought continues; there is virtually no precipitation since January. Clouds of alkali dust blow off exposed lakebed and degrade Basin air quality. DWP still continues to divert all the water it legally can, and L.A.'s water consumption is at an all-time high. The lake is expected to drop to 6377.7 feet by fall. California Legislature releases study, "The Future of Mono Lake" (CORI Report), which predicts serious consequences for the lake by 1989 if diversions continue.

**April.** In response to local sewer problems, L.A. City Council approves Mayor Bradley's landmark water conservation program with a goal of 10% reduction in water use.

**May.** Gulls fledge about 24,000 chicks, or 1.1 chick per nest, slightly lower than last year. Third District Court of Appeals rules that DWP licenses to divert Mono Basin streams are illegal, but grants DWP a rehearing. Mono County Board of Supervisors passes an emergency ordinance to safeguard local use of groundwater.

**June.** The Environmental Protection Agency changes the Mono Basin's air pollution classification and increases air quality monitoring.

**July.** President Reagan honors the Mono Lake Committee's work with a "Take Pride In America" award

given at a White House Ceremony. California Governor George Deukmejian and the Mono County Board of Supervisors also commend the MLC's efforts. Mono Basin National Forest Scenic Area Visitor Center receives \$4.3 million funding from Congress.

**August.** U.S. Fish and Wildlife Service declares Mono Lake brine shrimp a candidate for endangered species listing.

**September.** Mono Lake Committee celebrates its tenth anniversary at the Annual Bucketwalk on Labor Day. The lake falls to 6377.6 feet. DWP diversions continue, but so do court-ordered flows in Lee Vining and Rush creeks. Mono County Board of Supervisors adopts a resolution commending MLC for its achievements.

**October.** U.S. Forest Service recommends a lake level range of 6390-6377 feet to protect the lake's ecosystem in its draft Scenic Area Management Plan. Ninth Circuit Federal Court of Appeals dismisses nuisance air quality claims, referring the case back to state court system.

**November.** Lake's water mixes completely for the first time since 1983. DWP commissioners adopt a new policy on Mono Lake, publicly recognizing that diversions must be reduced if the lake's ecosystem is to be protected. They call for a cooperative effort between government and environmental groups to find a solution meeting L.A.'s and Mono Lake's needs.

**December.** After receiving numerous comments, Mono County requires Conway Ranch developers proposing a 690-unit resort community to further study the development's impact on wildlife in the northern Mono Basin. Lake drops to 6376.8 feet by the year's end. The snowpack was about 82 percent of normal by New Year's Day.

## Keep On Keeping On

The eleventh of January was a crystalline morning in the Mono Basin, a frigid 17 degrees through which the sun cast its brilliant light. It was also the anniversary of Dave's and Don's passing. A small group of family and friends gathered on Mono's north shore to remember and reflect on the ways their lives had

touched ours and still remain a part of our daily existence.

We walked across the snow to the "black hole," a place where fresh water springs visibly roil Mono Lake's placid waters. The silence was broken only by the sudden snap of shoes breaking through the icy crust. Our eyes were dazzled by the prismatic reflections of sun off snow.

In the silence, we circled and joined hands. The only sound now was that of the springs, bubbling through Mono's briny waters with a cadence that can only be described as joyful. The sound of life continuing.

Standing there, I thought about the difficult days following Dave's and Don's deaths. During that time I was asked again and again about the future of Mono Lake and the Mono Lake Committee. Without Dave, would the Committee fold? Would we be able to continue the struggle—and continue to win?

There was only one answer: the Committee will never stop until Mono Lake is protected.

In truth, the Committee—this far-reaching network of staff and supporters—was one of Dave's greatest gifts to Mono Lake. As Dave knew it would, the organization has transcended its visionary creator. It is not just one, or two, or even ten gifted people working to save Mono Lake, it is tens of thousands of committed people who share Dave's vision and who, through their personal efforts, will make the dream of a protected Mono Lake come true.

I am always deeply touched, and newly surprised, by the extraordinary generosity and support the Committee receives from Mono Lake's friends. A supporter spends hundreds of hours of his personal time collecting over 600 signatures on a petition to the U.S. Forest Service endorsing the Amenities Alternative. Another sends a \$3,000 check accompanied only by a white slip of paper with the



Lauren Davis

words, "keep up the good work." An attorney from Arizona writes a letter on behalf of Mono Lake which yields a modified court decision assuring the EPA's authority to protect Mono's air quality. And our extraordinary legal team from Morrison and Foerster and McCutchen, Doyle,

Brown and Enerson, after ten years of *pro bono* service and mountains of legal documents, still lead an unwavering and ever-mounting challenge to the legality of DWP's water diversions.

Another question often asked during those dark days following the accident was, "Did Dave believe we would ultimately win protection for Mono Lake?" This also I answered without hesitation: yes. I spoke with Dave several days before the accident, where we discussed upcoming events: the release of the CORI report, the Forest Service's Scenic Area Management Plan, and the Third District Court decision looming in the months ahead. And, for the first time in the four years that I had worked with Dave, I heard him say unequivocally that we would win—perhaps even within the next few years.

No one wins a victory such as Mono Lake's protection by themselves. It is the hard, selfless work of person upon person upon person. Dave knew this, and would have been both embarrassed by the paeans showered upon his memory and quick to turn the praise to the countless others who labored along with him.

Dave was an optimist by nature. Only an optimist would have, *could* have started the Mono Lake campaign. But on a day-to-day basis, with the ebb and flow of events, occasional pessimism is inevitable. On those days, Dave was fond of saying we must "keep on keeping on."

I hold on to those words. I believe in them, as I believe that all of us—staff, friends, volunteers, attorneys, scientists, supporters, contributors, bureaucrats and political leaders—working together will save Mono Lake. We will all "keep on keeping on" until we assure Mono Lake's permanent protection.

Martha Davis

## New DWP Mono Lake Policy

The Los Angeles Department of Water and Power Commissioners formally adopted a new policy on Mono Lake in late November, calling for a cooperative effort between various levels of government and the environmental community to reach "an equitable solution by which the needs and requirements of both the city and the lake can be accommodated."

The policy replaces DWP's earlier public stance that resolution of the Mono Lake controversy would be achieved only through litigation. Martha Davis, MLC's Executive Director, called DWP's decision "a constructive step forward—one that signals the Department's recognition that any resolution must meet the real water needs of Mono Lake as well as of Los Angeles."

In the two-page document, DWP stated that the department's "first priority" is to meet the water needs of the residents of the city of Los Angeles. However, the Department acknowledged its "responsibility to do what it reasonably can to maintain the lake in an environmentally healthy condition," and that "a reduction in the city's diversions will be required" to accomplish this goal.

Contending that the water must be replaced, DWP asserted that the responsibility for providing replacement supplies of water and energy must be shared by state and federal governments and other interested parties. DWP concluded that while it hoped that such a settlement between all parties would be reached, in the meantime the Department must "continue to represent the rights of the City of Los Angeles."

Davis said that the new policy "is the first time that DWP has publicly conceded that its water diversions are harming Mono Lake's ecosystem and that the diversions must be reduced in order to preserve Mono Lake in a healthy state." As recently as 1986, the Department had claimed that Mono Lake would remain healthy as water levels continued to plummet.

The new DWP position on Mono Lake brings the agency in line with policies that have been expressed by Los Angeles Mayor Tom Bradley, as well as with views published recently in editorials by the Los Angeles Times and other major Los Angeles newspapers.

Not everyone praised the Department for its new policy. Barrett McInerney, Vice-President for California Trout, remarked that "This means the [DWP] Board won't stand in the way of anybody else solving their problem."

However, Davis said the policy's real meaning will be demonstrated by what further steps DWP takes to bring about a common sense solution to the serious problems facing Mono Lake.

*Lauren Davis*

## Legal Update:

### Public Trust Back In State Courts

The 9th Circuit District Court of Appeals has sent the public trust case filed by the National Audubon Society, the Mono Lake Committee and others back to the California state court system, Alpine County. This case has been pending since 1983, so we are happy that it is moving ahead again. We had argued that the federal court should hear the Public Trust case because of the federal interest in the air pollution problems caused by the increasingly severe dust storms on Mono's exposed shorelines. However, the court dismissed our federal "common law nuisance air quality" claims, ruling that we could bring a nuisance claim under state law.

A flurry of procedural motions followed the 9th Circuit Court's decision. The Los Angeles Department of Water and Power filed a motion to combine the Rush and Lee Vining creeks lawsuits with the main public trust case. We concur with this motion because it will enable us to argue for the protection of Mono Lake and its streams as a whole ecosystem, rather than holding separate trials on the individual resources. We should know soon which court will hear the case. We also welcome the support of the Sierra Club Legal Defense Fund which has filed a motion to join Audubon and MLC as plaintiffs in the public trust case. Meanwhile, DWP has filed a claim against the state for compensation in the event that the city loses water as a result of the litigation.

The suit challenging the legality of DWP's water diversion licenses is still pending in the 3rd District Court of Appeals. Last spring, the court ruled that the licenses were illegal and ordered the State Water Resources Control Board to reissue them in compliance with state law which protects fish below dams. At DWP's request, the court agreed to rehear the case.

**LAST MINUTE UPDATE:** The 3rd District Court of Appeals upheld its decision on January 28. DWP will appeal the decision to the State Supreme Court. It remains to be seen if the higher court will hear the case.

*Ilene Mandelbaum and Lauren Davis*

*One enthusiastic Monophile shares his views on the May 1988 court ruling that Los Angeles DWP's licenses to divert Mono Lake's tributary streams are illegal. The report to which he refers is the Interagency Mono Lake Task Force plan which advocated saving the lake through water conservation. We appreciate your support!*

Hallelujah for the court decision! "Illegal," they say! "Champion," I say. Maybe now is the time for DWP to follow the recommendations of that joint committee's report of several years ago, for the time being at least.

If I were 57 instead of 75, I would come up there for the celebration and dance with you.

*Howard Gates, Altadena, California*



## Shrimp Alert!



**Mono Brine Shrimp Endangered Status  
Contested by DWP**

**Your Letters Needed!**

Mono Lake's brine shrimp, *Artemia monica*, is a candidate for endangered species listing with the U.S. Fish and Wildlife Service (FWS). Dennis Murphy, Director of Stanford University's Center for Conservation Biology, made the application for the listing in 1987. It is based on the premise that *Artemia monica* is a distinct species restricted to Mono Lake. With the rapidly shrinking lake level, Mono's rising salinity threatens the shrimp's future growth and reproduction. If diversions are not substantially reduced, scientists predict that the shrimp will become extinct within 25 years, with devastating consequences for Mono's bird populations (CORI Report, p. 14).

In the August 19, 1988 Federal Register (vol. 53, No. 161), FWS found that the petition was warranted and invited public comment. Not surprisingly, DWP emphatically opposes the listing. DWP's correspondence to FWS contends that the Mono Lake brine shrimp are not a separate species, misrepresenting recent published scientific information which reaches the opposite conclusion.\*

According to Murphy, DWP is alone in suggesting that *A. monica* be lumped together with other *Artemia* species. The Department's suggestion that the listing "should only proceed when the species is at the very threshold of extinction is repugnant and naive to the stated purposes of the Endangered Species Act," said Murphy.

Whether FWS will agree with DWP's argument remains to be seen. Larry Silver, Sierra Club Legal Defense Fund attorney, will be working to make sure the brine shrimp *A. monica* are listed accurately.

**You can help Mono's brine shrimp** by writing a letter to the U.S. Fish and Wildlife Service. Key points to include in your letter are:

- 1.) Why Mono Lake's brine shrimp are important to you. Speak from your personal experience at Mono Lake.
- 2.) The Mono Lake brine shrimp, *Artemia monica* is a separate, unique species and an essential component of a highly valued ecosystem.
- 3.) The Mono Lake brine shrimp population is already declining due to increased salinity.
- 4.) If diversions continue, the brine shrimp will decline dramatically within this decade.

Send your letters to: Region I Director, U.S. Fish and Wildlife Service, Lloyd 500 Bldg., Ste. 1692, 500 N.E. Multnomah St., Portland, OR 97232

*Ilene Mandelbaum and Lauren Davis*

Abreu-Grobois, Alberto F. 1987. Review of the Genetics of *Artemia*. Proceedings of the Second International Symposium on the brine shrimp *Artemia*.

## Negit's Last Stand?

*"The voices of the gulls sound like pleas for help and cries for their lost young"—David Gaines, Mono Lake Newsletter, Summer 1979.*

So wrote Dave Gaines when coyotes first made their way across the landbridge to Negit Island and routed 16,000 pairs of nesting gulls nearly a decade ago. Fortunately, high snowpack years in 1983-86 raised Mono Lake about nine feet. A narrow strip of water covered up the landbridge, and in 1985, 92 pairs of gulls returned to nest on Negit. The recolonization trend has continued each year since then. Point Reyes Bird Observatory researcher Jan Dierks tallied 2,037 nesting pairs and 1,738 chicks on the island. (Please see research update page 12).

Unfortunately, after the brief reprieve granted by wet years, the destruction of Mono Lake is right on schedule. Negit, once home to two-thirds of Mono's gull breeding colony, will be reconnected to the landbridge by late this year (Botkin et. al, 1988), unless immediate action is taken to reduce water diversions. Losing Negit represents a major disruption to the trend of gull recolonization.

Furthermore, 65.6 percent of Mono Lake gulls nest on those islands/islets next in succession to be connected to the landbridge: Pancake and Negit (stranded at lake elevation approx. 6376'), and Twain and Java (approx. 6373'). This will cause large-scale upset by predators and probable lowered reproductive success.

The CORI report puts to rest any questions about the impacts of the landbridge: "There is no doubt that landbridging of breeding islands and islets, especially Negit, Twain, and Java, has major effects on breeding populations" (B.2).

*Emilie Strauss*

Botkin, Daniel B. et al. 1988. *The Future of Mono Lake*. Report of the Community and Organization Research Institute (CORI) for the Legislature of the State of California. Report # 68, Water Resources Center, UC Riverside.

## Lake Level Falls 1.8 Feet In Past Year

By December 1988, Mono Lake had fallen to 6376.8 feet, a drop of 1.8 feet below its level at the end of 1987. The outlook for next year's water supply is slightly more promising, thanks to several winter storms. The Mammoth Pass snowpack had reached 76% of normal by January 18, and Lee Vining had some snow, but a long dry period since that date has us concerned.

*Peggy Nicholson*

## Mono Lake Mixes It Up

Mono Lake has returned to its previous condition of annual autumn mixing from top to bottom. Complete mixing was indicated by uniform profiles of temperature, salinity, and nutrients from top to bottom in late November field surveys. This has not occurred since 1982 (see Research Updates for details).

The abrupt mixing of previously isolated bottom water has created interesting conditions. Ammonium, which had accumulated deep in the lake, has been mixed upward leading to much higher than usual surface concentrations of this nutrient. Oxygen concentrations were reduced to near zero throughout the lake, as a combination of chemical and biological processes consumed the available oxygen. The brine shrimp populations abruptly declined and algae have increased to above-normal concentrations for this time of year.

The decline in shrimp is most likely due to both the low oxygen conditions and the drop in water temperatures. While this decline was more abrupt than during the previous six years, brine shrimp populations always decline in the autumn and reach near zero abundances by winter as temperatures decrease. Most of the cysts for the next year's population have already been produced by this time. The algae increase each autumn as the brine shrimp which graze on the plants die. The above-normal increase seen this year is most likely due to the increased availability of ammonium which is a primary nutrient for algal growth.

We will be closely monitoring algal growth and abundance, as well as the brine shrimp population this coming year. We expect to find a higher than normal growth of algae due to an increased supply of ammonium. More food for the shrimp may in turn result in increased fecundity. Changes in hatching may also affect the brine shrimp abundance. Mono's shrimp overwinter by producing a specialized egg called a cyst which lays dormant in lake bottom sediments until spring. Since portions of the sediments which have been anoxic (lacking oxygen) for six years may now become oxygenated, cysts in these previously anoxic sediments could hatch now that oxygen is available. We also do not know how long the current lakewide anoxic conditions will last and what effect this may have on the lake. We will try to answer these questions during research this year.

Our research is funded by a grant to the University of California by the Los Angeles Department of Water and Power.

Bob Jellison



## From Bee Flies to Bighorn: Mono Basin Research Updates

This has been an exciting year for researchers at Mono Lake. The breakdown of stratified layers of water in the lake (meromixis) has signaled a dramatic change in Mono's ecosystem dynamics. When the lake "turned over" in mid-November most of us in Lee Vining noticed the strong odor of sulfur permeating the Basin on calm days. The lake appeared dark green with algae. Researchers dropped everything and spent several days measuring the lake from top to bottom to collect data regarding changes in temperature, chemical make-up, algal density, light penetration and other information. The results are presented on page 11 and in the adjacent article.

The research updates also present findings from ongoing experiments and field observations throughout the Basin. This year's reports will give you a feel for the incredible diversity of life in and around Mono Lake. For more information, you may contact individuals directly.

Lauren Davis

### The Origin of Tufa Towers

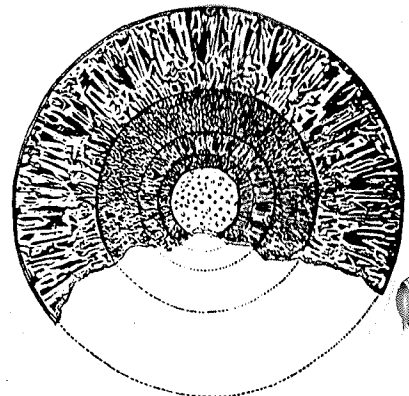
Todd A. Council  
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The tufa towers at Mono Lake are structures of both beauty and mystery. Their origin and history of growth have puzzled scientists since the early descriptions by Russell (1883 and 1889). However, geologists do agree that the towers were formed under the lake surface at the sites of underwater springs, the result of spring water laden with dissolved calcium mixing with bicarbonate-rich lake water.

I began my master's thesis research in the summer of 1987 but conducted most of my field work in January and February of 1988. Time was spent photographing and observing tufa deposits from every major grove around Mono Lake as well as collecting samples from groves at Lee Vining Tufa, Simons Springs and Warm Springs. These samples are currently being analyzed.

Several interesting findings have come from this year's work. Most important is the genetic relationship between the thinolitic tufa (ice-age formations composed of small crystals), found almost a thousand feet above the present lake level, and the modern tufa that dots today's shoreline. As suggested by Shearman and Smith (1985), the parent mineral of the thinolitic tufa is a rare cold water carbonate mineral *ikaite*. This carbonate mineral forms when water temperatures are

Horizontal section  
of a tufa tower



close to 0° Centigrade, and is the parent mineral of the modern tufa. As the water warms, the mineral is altered to calcite, leaving a very porous substance not unlike the cores of many of the modern tufa towers. If the water warms up slowly, as it did during the Pleistocene, the crystal shape of the *ikaite* would be preserved as in the thinolithic tufa. Field work this winter will explore this idea in more detail.

As my research continues, I hope to answer many of the questions concerning the role of algae in the development of the tufa towers. I am also looking at the different textures and forms of tufa in hope of explaining their origin. This research will help us better understand the history of the development and the future of the puzzling tufa deposits of Mono Lake. Any comments or suggestions are welcome.

Russell, I.C., 1883, Sketch of the Geologic History of Lake Lahontan: U.S. Geol. Survey 3rd Ann. Report for 1881-1882, pp. 189-235.  
 Russell, I.C., 1889, Quarternary history of Mono Lake, California: U.S. Geol. Survey 8th Ann. Rept. for 1886-1887, pp.261-394.  
 Shearman, D.J., and A.J. Smith, 1985. Ikaite, the parent mineral of jarrowite-type pseudomorphs. Proc. Geol. Assoc'n., vol. 96 (4), pp. 305-314.

## Aquatic Ecology

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### ECOSYSTEM RESPONSE TO MEROMIXIS

Meromixis, a condition of persistent chemical layering (see illustration below), has profoundly affected ecosystem dynamics in Mono Lake since its inception in 1983. Meromixis was initiated by large inflows of freshwater which were the result of heavy spring runoff from the Sierra Nevada and reduced diversions\* by the Los Angeles Department of Water and Power. The lighter fresh water flowed over the heavier, more saline water in the lake. This set up a large vertical chemical and density gradient which has prevented complete mixing of the lake.

In typical years, Mono Lake mixes from top to bottom each winter as the surface waters cool and become denser than underlying water. Windy winter storms also aid in vertical mixing. This seasonal mixing provides for the return of nutrients, which accumulate near the bottom, to the surface waters where they can be utilized by the algae.

Throughout 1988, we have observed events which indicate meromixis is breaking down and we expect the lake to mix completely this winter. (ed. note *The lake did mix to the bottom in mid-November. Please see Bob Jellison's article on page 10.*) Our monitoring program, which includes measurements of the physical, chemical, and biological conditions in the lake, extends back to 1979 and spans all phases of meromixis. Thus, we have an invaluable data set over a wide range of conditions for the analysis of seasonal and year-to-year changes in the algae and shrimp populations.

The onset of meromixis in 1983 caused changes in both primary production (algal growth) and nutrient supply. Total primary production decreased in the spring of 1984 and 1985 immediately after the onset of meromixis. This was most likely caused by the reduced vertical mixing of nutrients in the spring. Also, concentrations of nutrients in the deep, high-salinity layer of non-mixing water (the monimolimnion) began increasing to levels much higher than observed in previous years as they were not mixed into the surface during the winter. Since then we have seen a gradual return to higher levels of productivity as the chemocline (the depth where the upper fresher water meets the lower, more saline waters) has deepened and entrained nutrient-rich water from near the lake bottom.

Two significant changes were noted in the brine shrimp population with the onset of meromixis. The abundance of the first generation adult brine shrimp increased ten-fold. It is likely the brine shrimp population was responding to a suite of factors associated with meromixis, which potentially affected the hatching and survivorship of the first generation shrimp. These factors include changes in spring algae levels, light transmission, salinity and the area of sediments exposed to oxygen. The second change associated with meromixis was the large decrease in the number of eggs carried by the first generation females which occurred due to the decreased algal levels noted above.

Effects of the deeper chemocline and increased mixing are already being observed this year. Ammonium concentrations (the most important limiting nutrient for the algae) were high this spring and summer, and spring and autumn algal concentrations had increased and even surpassed pre-meromixis levels. Ammonium concentrations in the bottom layer remain high and will raise ammonium levels in the upper water layer to concentrations well above any previously observed should the lake "turn over" (mix completely). The brine shrimp responded to this increase in its food source by producing larger brood sizes in spring and autumn, a trend observed in pre-meromixis years. The most outstanding feature of the 1988 *Artemia* dynamics was the large peak of first generation adults. The 71,000 individuals/square meter observed in June was twice as high as any previous year. Since *Artemia* cysts (overwintering eggs) require oxygen to hatch, this high abundance may be due to the greater area of sediments exposed to oxygen in 1988 (as the chemocline lowers, more sediments are exposed to oxygen). In addition, high cyst production occurred in 1987, providing a larger pool of cysts for 1988.

Mono Lake is likely to turn over this year since the chemical stratification which has persisted since 1982 is no longer present. Although the lake has not yet mixed to the bottom, conductivity profiles (a measure of ion concentration) from August of this year show no vertical gradients (layers). During the last two drought years, the evaporation of the less saline surface water had led to increases in its salinity. Given normal winter conditions, the lake will turn over this winter when the surface waters cool to temperatures near or below the ones observed in the non-mixing bottom water (ca.4° C). Even if abnormal conditions prevent complete mixing (holomixis), we expect the mixed layer to deepen significantly this year.

### MODELING BRINE SHRIMP POPULATION DYNAMICS

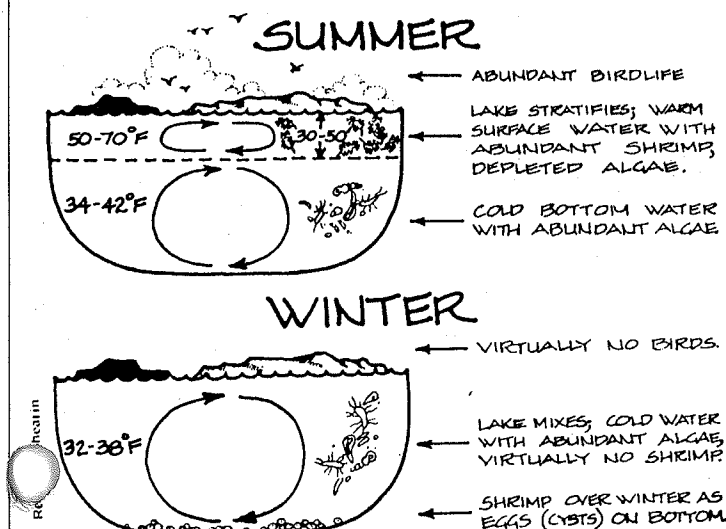
Over the past two years, we have been developing a model to explain the large year-to-year fluctuations in the brine shrimp populations. We are currently employing this model to analyze laboratory experiments in which shrimp are raised in conditions which mimic those seen in the lake.

### FUTURE RESEARCH

Our research in 1989 will continue to focus on the development of a population model to analyze the *Artemia* field data collected over the past seven years. The proposed modeling analysis will synthesize the *Artemia* data from 1982-1988, estimate variations in mortality rates, determine to what extent the observed variation can be explained by our current understanding, and identify areas of needed research. In addition to modeling, we will continue the monitoring program necessary to detect changes in the algae and brine shrimp dynamics and follow the lake's behavior after the breakdown of meromixis.

Our research was supported by a grant to Dr. John Melack, University of California at Santa Barbara, from the Los Angeles Department of Water and Power.

\*Editor's note: DWP had to reduce diversions from the Mono Basin because the aqueduct was running full with the exceptionally high runoff.



## SCUBA Studies of the Brine (Alkali) Fly and its Lake Bottom Habitat

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The summer of 1988 began the first year of a two-year SCUBA diving study of the lake bottom habitat of the larvae and pupae of the alkali fly *Ephydra hians*. As lake levels fluctuate with climatic changes or stream diversions, the area of lake bottom that is habitable will change. These alterations in available living space will affect the abundance of flies at Mono Lake upon which many birds depend for a food source. The objective of the SCUBA studies are to provide a description of the physical substrates of the lake bottom and distribution of this insect on these substrates at different depths. This information may then be applied to a model which will relate insect abundance to the amount of usable habitat available at any projected lake level. This work has been undertaken through a grant from the California Policy Seminar, a program sponsored by the California state legislature to provide information that will be used to resolve public policy issues.

Although very little is known of the depth distribution of the alkali fly, the type of substrate they prefer to inhabit was the subject of research I presented at the 4th International Conference on Inland Saline Lakes, held in Banyoles, Spain this past May. Larvae and pupae have a clumped distribution, and are associated mainly with tufa, although areas with inundated terrestrial vegetation (salt grass *Distichlis*) are also used for attachment by pupae. Areas that are shallow, stabilized by tufa, and contain deposits of organic matter are the most productive habitats for the growth of fly larvae. In addition, shore-dwelling adult flies are most abundant where there are nearby tufa deposits. This work will be published in a forthcoming issue of the journal *Hydrobiologia*.

In addition to these ecological studies, I am continuing physiological studies of how the alkali fly adapts to the saline alkaline waters of Mono Lake. Specialized lime glands that collect and excrete carbonate ions taken in from lake water were described in the 1987 research update. The results will be published in the *Journal of Experimental Biology*. I've also completed studies of the growth response of benthic algae to salinity (also reported in the 1987 research update) and have submitted them for publication. All of these studies have been conducted in collaboration with Dr. Tim Bradley of the University of California at Irvine.

## Population Biology of Bee Flies

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Dunes on the north shore of Mono Lake support abundant life, in part because of the denser flowering vegetation on the dunes relative to adjacent habitats. On these dunes occurs a species of bee fly, *Lordotus pulcherrimus*, which we have been studying for eight field seasons, including 1988. Males of this species gather in groups to compete for mates. The males engage in combat in aerial swarms, about 5 or 10 meters above an area they use for warming up on the sand (males need a high body temperature to maintain the vigorous flight required). The females come to the groups to mate, evidently the same day they emerge as adults. These groups of males, known as leks, are found in the same locations every year, although these flies only live one season.

Our research goal last year was to discover why leks occur in the same spots each year—how do new males discover the traditional locations if there are no survivors from a previous year? The first question is whether the leks occur where resources for females are abundant; that is, do males gather where the females are found? We can find no such resource. Females feed primarily on flowers of *Chrysothamnus nauseosus*, the common rabbitbrush. If anything, rabbitbrush is less dense at the lek sites. Alternatively, males might gather where virgin females emerge from the sand. So far, we have no evidence that emergence sites of females are clumped anywhere, much less near the tradi-

tional lekking areas. If anything, the opposite appears to be true; females of all ages are widely dispersed in the dune habitat.

Our working hypothesis is that these sites occur at arbitrary locations. Arbitrary locations are typical of lekking species, such as sage grouse (which also occur in the Basin). We know that males need a clear area to warm up on the sand and a place sheltered from the wind, but there are many such places on the dunes that have no leks. Last year we began to measure as many variables that might be important to male and female flies as we could think of. These are primarily habitat variables, such as elevation profiles and specific vegetative cover. We need to find out whether the flies are using some subtle physical cue that we humans might overlook, or whether the sites are truly arbitrary. Our data from last year suggests flies only occur on mid-dune slopes where rabbitbrush is common and avoid the dune tops which are dominated by *Sarcobates*, salt brush. But, within that habitat they can occur on any slope direction or any of the various densities of rabbitbrush. Next year we will try to find as many new leks as possible, to measure habitat parameters around them, and to take measurements in the dune habitat where leks do not occur. We also hypothesize that a scent is used to mark traditional sites from year to year, but otherwise, nothing seems important about these sites relative to many others in the dunes.

In addition to our studies on this beautiful species of fly, our research is discovering the biological richness and complexity of the dune habitat. Although the dunes are not part of the lake's aquatic habitat, they are an integral part of the lake's ecosystems. The dunes were once the lake's shore, and formed when the lake receded thousands of years ago. Also, we suspect that the water table and therefore the plant and animal life in the dunes are closely tied to the present lake level.



Bee Fly lek site observed by Lisa Palermo. Photo by C. Toft.

## Population and Reproductive Success of Gulls

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California Gulls nest at salt lakes, fresh water lakes, and reservoirs in the western United States and Canada. The colony at Mono Lake is second in size only to the one at Great Salt Lake, Utah. This is the sixth year Point Reyes Bird Observatory has conducted research at the gull colony at Mono Lake.

In 1988, about 45,000 gulls nested at Mono Lake. Since 1983, the number of nesting gulls has varied from about 45,000 to 50,000. About half the gulls this year nested on Twain Islet. Negit Island had over 2,000 nests, the most it has had since it was recolonized by the gulls in 1985. The number of nests on Pancake Islet has increased from less than 10 in 1986 to over 1,200 this year. Nesting on some of the other islets has decreased in recent years. Negit Island, Twain and Pancake islets were all connected to the mainland when the lake level reached its lowest point in the early 1980s. If the lake level falls to this point again, nesting in these areas is likely to be disrupted by coyotes.



Although the number of adults breeding each year has remained relatively constant, the number of chicks produced has been more variable. In our fenced study plot this year, an average of 1.1 chicks fledged per nest, a figure almost identical to last year's. This indicates that around 24,000 chicks fledged in 1988 for the lake as a whole. The number of chicks produced this year is lower than the last two years, but



Researcher Jan Dierks with spray paint device she invented for marking nest sites. Photo: Cecilia Bock.

higher than the years 1983 through 1985. Fewer chicks had ticks this year than in most previous years. Chicks with ticks suffered higher mortality than those without. As usual, brine flies and brine shrimp together made up more than half of the food fed to chicks. However, in 1988, for the first time since the studies began, brine flies were more abundant than brine shrimp in the diet. Ticks and food supply are just two of a number of factors which affect breeding success. Nesting habitat, weather, and predation can also be important.

Our work was made possible by a large number of volunteers. The Mono Lake Foundation helped fund the project. Joseph R. Jehl, Jr. contributed the data from Paoha Island and Paoha islets.

## Migratory Bird Studies

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Sea World Research Institute is continuing its long-term studies on migratory bird populations. The major goal is to understand the adaptations of birds for exploiting the resources of highly saline lakes, such as Mono, and how the species that prefer these lakes—California Gulls, Eared Grebes, Wilson's Phalaropes—may respond to environmental changes. These studies require knowledge of other components of the Mono Lake ecosystem and of events at other salt lakes and on the species' breeding grounds.

With Point Reyes Bird Observatory, we have continued to document the size and reproductive success of the California Gull population. 1988 was a successful year in our study area on the Paoha Islets, and the gulls fledged nearly one chick/breeding pair.

Wilson's Phalarope numbers were slightly lower than in some recent years and the timing of the fall migration at Mono Lake and other areas was earlier than usual. This evidently resulted from the major

# DWP Research Activities

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During 1988, the Los Angeles Department of Water and Power (Department) continued to fund a multidisciplinary research program in the Mono Basin. The goal of our research is to provide the information necessary to assess the effects of the City's water diversions on the Mono Basin environment and lake ecosystem. The following is a brief description of our research program.

## Air Quality Monitoring

The Department continues to collect and analyze meteorological and air quality data from two Mono Lake locations, in cooperation with the Great Basin Unified Air Pollution Control District.

## Avian Studies

The Department continues to fund research by Dr. Joseph Jehl of Sea World Research Institute on Mono Lake birds. Research during 1988 focused on:

1. Gull productivity and the causes of gull chick mortality.
2. Grebe banding for demographic studies.
3. Phalarope abundance and energy metabolism.
4. Utilization of Mono Lake islands and islets for nesting.

(For more details, please see a research update by Dr. Jehl.)

## Brine (Alkali) Fly Physiology and Ecology

The Department supported the work of Dr. Timothy Bradley, U.C. Irvine, and Dr. Stuart Hurlbert, San Diego State University, on brine fly biology. Dr. Bradley is investigating the brine fly's ability to tolerate

saline water. Dr. Hurlbert is attempting to determine substrate preferences of the brine fly, in addition to assessing seasonal changes in pupal and larval abundance.

## Brine Shrimp Ecology and Phytoplankton Dynamics

The Department is nearing its tenth year of monitoring brine shrimp abundance in Mono Lake. This information is collected along with basic limnological data by a U.C. Santa Barbara research team under the direction of Dr. John Melack. The goal of this research is to derive a model capable predicting primary (plant) and secondary (animal) productivity in Mono Lake (Please see research update by Gayle Dana and Robert Jellison.)

## Freshwater Fisheries and Streamside Revegetation

Mono Lake's tributary streams are the focus of the Department's fisheries research and revegetation studies. The Department continues its support for fishery and streamflow studies. A jointly-funded study with the Department of Fish and Game (DF&G) supported Beak Consultants' work in developing a model of habitat suitability for fish. A final report is due to DF&G sometime this year. Dr. Duncan Patten from Arizona State University is conducting a Department-sponsored study of streamside vegetation along lower Rush Creek. The goal of his research is to monitor the progress of revegetation along Rush Creek from year to year.

## Mono Basin Geohydrology

The Department updated its Mono Lake hydrologic model to include data through 1986 and the area-volume information provided by last year's bathymetric survey. The Department continues to monitor groundwater and spring flow to Mono Lake with a network of shallow-profile wells along the lakeshore. Dr. Shirley Dreiss of U.C. Santa Cruz and Dr. John Dracup of U.C. Los Angeles are analyzing the data, along with Department staff hydrologists.

drought in the prairies, where breeding success was low. This situation well illustrates the need for understanding events throughout the species' range if changes at Mono Lake are to be interpreted correctly.

Studies of Eared Grebes are concentrating on the relationship between food abundance, weight gain, and departure schedules. We are also continuing our banding program to learn more about the birds' origins and destinations. This year we obtained our first recapture—a bird banded at Mono Lake in 1985.

Much of our early work on grebes and phalaropes had been summarized in a recent publication: *Biology of the Eared Grebe and Wilson's Phalarope in the nonbreeding season: a study of adaptations to saline lakes*. It is available from the Cooper Ornithological Society, Department of Biology, University of California, Los Angeles, 90024.

These studies have been supported by the Los Angeles Department of Water and Power and Sea World Research Institute.

## Survey of Breeding Snowy Plovers in 1988

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In the late 1970s and early 1980s breeding Snowy Plover numbers were obtained for the western states as a reference for a future comparison. During the summer of 1988 Point Reyes Bird Observatory, various state fish and game agencies and the U.S. Fish and Wildlife Service jointly resurveyed breeding plovers throughout the interior of the western states. While the results of that survey are not yet completed, the Mono Lake count can be compared with the previous one from ten years ago.

The 342 plovers counted at Mono Lake in May 1988 were 11% fewer than the 384 in 1978. We do not find this small decrease to be cause for alarm. The difference between the two years may just as well reflect naturally fluctuating population level as it does a downward trend. The results from the broader-based survey will help put the Mono Lake findings into perspective.

Snowy Plovers were distributed differently around the lake in 1988 than previously. While the southeastern shoreline held similar numbers of plovers on both surveys, the eastern shoreline, from Simons Springs to Warm Springs, held 42% of the birds in 1988, but only 2% in 1978. The north shore, from just west of Warm Springs to Black Point, held 65% of the plovers in 1978 and 47% in 1988. Forty-six of the plovers were found on the landbridge in 1988 where there were none in 1978. Plovers were absent in the County Park on the 1988 survey; there had been 15 in 1978.

The contrast between the two surveys shows that plover use of different parts of the lake shore changes from year to year. Without knowing how the plovers may shift on a yearly basis, conservation practices for the Snowy Plover at Mono Lake, should be based on the premise that all shoreline from Navy Beach to Black Point is critical plover breeding habitat.

## Sand Dune Mammal Community Studies

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The sandy soil of Mono Lake's east side harbors a diverse community of small mammals distinct from those elsewhere in the Basin. Since 1978, I have been studying this community on the dunes northeast of the lake. To the uninitiated, these dunes appear to be a simple community of low diversity, but small mammals can be surprisingly abundant and diverse here. On a good night, I can find two kangaroo rat species (Panamint and Ord's), the Dark Kangaroo Mouse, Great Basin Pocket Mouse, Northern Grasshopper Mouse, Sagebrush Vole, Deer Mouse, and Merriam's Shrew. During the day, Sagebrush Chipmunks are ubiquitous, as well as Black-tailed Hares. In 1987, I captured an Antelope Ground Squirrel, a species not previously reported at Mono, though it probably occurs along the Basin's eastern margin.

All dunes at Mono are not alike. Rodent communities vary in different locations depending on the openness of the habitat and the shrub species found there. My major concern was the ways in which the nocturnal members of this community might interact with one another. Early in my studies, I found that the common rodents in the sand dune community use microhabitats (foraging areas) and seed distribution patterns differently. Jumping species like Kangaroo rats and mice are better able to escape from predators. Because of this advantage, they can use the open, exposed areas between shrubs, giving them access to seeds and insects which are essentially not available for the less adept rodents like deer mice, which can only run. Focusing on the jumping rodents in open microhabitats, I found that the larger kangaroo rats are better able to locate and exploit rich clumps of seeds than are the smaller kangaroo mice, which must subsist on scattered, lower density food items.

In recent years, I have become involved in other studies, but I have returned to Mono Lake during most summers to monitor population trends and look for changes in how dune rodents use microhabitats and resources. I study these changes by taking advantage of the dunes' sandy soil. By simply smoothing out unit-sized plots of sand, I can measure how rodents use the plots in different microhabitats by identifying and counting their tracks. I also place seeds in different arrangements (clumps or scattered seeds) to monitor the extent to which various species are able to exploit these distribution patterns.

Over the years, the basic pattern described above has held true. There have been, however, interesting shifts in microhabitat and seed clump use, especially for the smallest rodent, the Dark Kangaroo Mouse. This diminutive mouse is highly specialized for the desert environment. By producing concentrated urine, the Kangaroo Mouse can save water. Its ability to jump and its enlarged inner ears enable it to avoid predators. To survive in winter, the Dark Kangaroo Mouse carries seeds in external pouches to a cache and also stores fat in a unique tail fat deposit. Since this mouse can harvest scattered, low-density resources and eat a variety of foods, it can coexist with larger rodents.

Unlike many other members of its community, the Dark Kangaroo Mouse has remained at relatively constant population densities since 1978, while other species have fluctuated in abundance. The Kangaroo Mouse responds to the fluctuations of other rodents by expanding and contracting its niche. When Deer Mice are rare, Kangaroo Mice begin to use areas near shrub cover where seeds and insects are more abundant, though they continue to use open spaces. When Deer Mouse populations peak, Kangaroo Mice are found mostly in the open. When Kangaroo Rats are rare, Kangaroo Mice can be found exploiting rich clumps of seed on experimental plots. When rats are common, Kangaroo Mice are restricted to using more scattered resources.

Several years of data paint a picture of the Kangaroo Mouse as the "odd man out" in the sand dune community. It occupies a niche which is unfavorable in some respects: open, exposed microhabitat and low-density seed and insect foods. Ironically, this species has the most consistent population in the dunes. I like to think of Kangaroo Mice as the ultimate desert misers, using specialized adaptations to wring an existence from a seemingly harsh and unforgiving habitat.



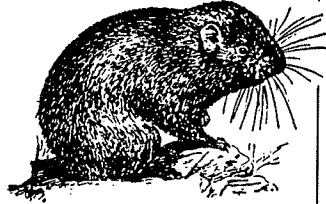
Deer Mouse poses for the camera in the Mono Basin.

## Mono Basin Mountain Beaver Update

Dale T. Steel

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I am researching the status and distribution of Mono Basin mountain beaver, *Aplodontia rufa californica* as part of my long-term studies of the ecology of mountain beaver in California. This unique rodent, not a true beaver, spends much of its time underground and appears to have physiological limitations that would confine it to moist, lush habitats. The mountain beaver is about the size and appearance of a tailless muskrat and typically makes extensive burrow systems in soft, damp ground.



My work with mountain beaver is a direct extension of an unusual sighting I made in 1976 while working with the Mono Lake Research Group. At that time, I observed a mountain beaver foraging among the tufa at the South Tufa Grove. This unusual sighting was apparently the first indication that mountain beaver could exist in such arid conditions. Since then, I have studied mountain beaver in many parts of California, but this original sighting remains the most unusual for this species. Mountain beaver in the Mono Basin are populations of the Sierra subspecies which ranges throughout the Sierra Nevada.

My research in the Basin involves periodic surveys of potential mountain beaver habitat. Possible habitat includes wet thickets and riparian areas, especially where there is nearby herbaceous forage. This year, I spent most of my time in several upper drainages in the basin looking for new populations. It appears that grazing and water diversions have greatly altered the riparian habitat available for mountain beaver. No new populations were located although there is apparently good habitat above the areas I surveyed. Several road-killed mountain beaver have been collected previously north of Lee Vining on Highway 395, but no active burrow systems have been located in the basin. In addition to the road kills, I have been notified on three occasions by people identifying mountain beaver as the animal they saw in the South Tufa Grove, after they reviewed my flyer requesting information on mountain beaver.

This portion of my mountain beaver research is unfunded but I expect to continue it for at least one more field season. I will also provide comments regarding proposed projects and management plans that could impact mountain beaver populations. I will continue to collaborate with a graduate student studying mountain beaver populations in Yosemite. His preliminary work is providing better mapping of riparian corridors that may be the source of mountain beaver into the Mono Basin. So far, I believe that mountain beaver were, at least previously, found in the major drainages on the western edge of the basin. Water diversions and grazing practices appear to have reduced riparian habitat and quite possibly affected mountain beaver populations. The U.S. Fish and Wildlife Service consider mountain beaver in the Mono Basin to be a candidate for endangered species listing.

I have produced several mountain beaver reports for the Department of Fish and Game and the U.S. Fish and Wildlife Service as well as my master's thesis that covers the ecology of mountain beaver in California. For more information on this subject, I can be contacted at the address above.

## Bighorn Sheep At Home In Lee Vining Canyon

Les Chow and Peggy Moore  
P.O. Box 389  
Lee Vining, CA 93541

Our study of the Lee Vining bighorn sheep reintroduction continued for a third year. We again conducted complete censuses every ten days to investigate population dynamics within the new herd. Eight lambs were born in 1988. Five sheep died: two of the deaths



were due to mountain lion predation. The herd currently contains 35 sheep. We continued to document sheep movement and distribution patterns and found a slight expansion in the size of summer range. In addition, we intensified our efforts to characterize bighorn sheep forage sites. We established 25 permanent plots which will be resampled at five-year intervals to determine how the bighorn are affecting their habitat. The study has been extended for another year with fieldwork scheduled to end in September 1989.

(Please see also page 16 of this newsletter for more information on bighorn sheep.)

## Recent Publications

- \*Community and Organization Research Institute (CORI). 1988. The Future of Mono Lake. University of California, Water Resource Center Report No. 68.
- \*Community and Organization Research Organization (CORI). 1988. Appendices to the future of Mono Lake. University of California, Water Resources Center Report No. 68.
- \*Conte, F.P. R.S. Jellison, and G.L. Starrett. 1988. Nearshore and pelagic abundances of *Artemia monica* in Mono Lake, California. *Hydrobiologia* 158:173-181.
- \*Dana, G.L., C.J. Foley, G.L. Starrett, W.M. Perry, and J.M. Melack. 1988. *In situ* hatching of *Artemia monica* cysts in Mono Lake, California. *Hydrobiologia* 158:183-190.
- \*Gaines, David. 1988. Birds of Yosemite and the East Slope. Artemisia Press, Lee Vining, California.
- \*Herbst, D.B. 1988. Comparative population ecology of *Ephydra hians* Say (Diptera: Ephydriidae) at Mono Lake (California) and Abert Lake (Oregon). *Hydrobiologia* 158:145-166.
- \*Herbst, D.B. and T.J. Bradley. 1988. Osmoregulation in Dolichopodid larvae (*Hydrophorus plumbeus*) from a saline lake. *Journal of Insect Physiol.* 34:369-372.
- \*Herbst, D.B., F.P. Conte and V.J. Brookes. 1988. Osmoregulation in an alkaline salt lake insect, *Ephydra (Hydropyrosus) hians* Say (Diptera: Ephydriidae) in relation to water chemistry. *Journal of Insect Physiol.* 34:903-909.
- \*Herczeg, Andrew L., and Dieter Imboden. 1988. Tritium hydrologic studies in four closed-basin lakes in the Great Basin, U.S.A. *Limnol. Oceanogr.* 33(2), 157-173.
- \*Jehl, Joseph R., Jr. 1988. Biology of the Eared Grebe and Wilson's Phalarope in the nonbreeding season: a study of adaptations to saline lakes. Cooper Ornithological Society, Department of Biology, University of California, Los Angeles.
- \*Jellison, R. and J.M. Melack. 1988. Photosynthetic activity of phytoplankton and its relation to environmental factors in hypersaline Mono Lake, California. *Hydrobiologia* 158:69-88.
- \*Lenz, P.H., and G.L. Dana. 1987. Life-cycles in *Artemia*: a comparison between a subtropical and a temperate population. In: P. Sorgeloos, D.A. Bengston, W. Decleir, and E. Jaspers (Eds.) Vol. 3, *Oecologia, culturing, use in aquaculture*. Universa Press, Wetteren, Belgium. 556 pp.

### Abstracts

- \*Dana, G.L., R. Jellison, and J.M. Melack. 1988. Cyst production of the brine shrimp, *Artemia monica*, in Mono Lake, California (USA). Abstract for the IV International Symposium on Thalassic (Inland) Saline Lakes, Banyoles, Spain, May 2-8, 1988.
- \*Dana, G.L., R. Jellison, P.H. Lenz, and J.M. Melack. 1988. Factors affecting population size of the brine shrimp, *Artemia monica*, in hypersaline Mono Lake, California. Abstract for the Annual Meeting of the American Society of Limnologists and Oceanographers, Boulder, Colorado, June 12-18, 1988.
- \*Jellison, R., G.L. Dana, and J.M. Melack. Changes in algal abundance and ammonium concentrations following the onset of meromixis in hypersaline Mono Lake. Abstract for the Annual Meeting of the American Society of Limnologists and Oceanographers, Boulder, Colorado, June 12-18, 1988.

## Bighorn Sheep Making A Comeback

Once threatened with extinction from overhunting and disease, Bighorn Sheep have returned to roam the Eastern Sierra. Within the past decade, the California Sierra Nevada Bighorn Sheep Interagency Advisory Group has reintroduced the sheep at various locations throughout the state in hopes the species will eventually reestablish themselves into self-sustaining herds. Lee Vining Canyon, the route which the Tioga Pass road follows from the east into Yosemite National Park, was one of the sites selected for reintroduction.

The Sierra Nevada Bighorn Sheep race is now rare. The sheep probably lived in the Lee Vining Canyon/Tioga Pass region in large numbers before the late 1870s when overhunting and disease contracted from domestic animals caused their local extinction. As the bighorn became increasingly endangered in the later nineteenth century, the state legislature passed laws to protect them.

Since bighorn prefer to live in rocky terrain and need winter and summer habitat, Tioga Pass and Lee Vining Canyon provide the sheep with everything they need. Here, the animals summer in the cool Yosemite high country and winter in the lower, warmer canyon where snow melts relatively quickly, according to Les Chow, one of the biotechnicians overseeing the reintroduction. (See also Research Update, page 15).

In early March 1986, 27 Bighorn Sheep were transplanted from Mount Baxter, home of California's largest herd, to Lee Vining Canyon. The transplant included 13 adult ewes, 7 adult rams and 7 lambs. To monitor movement, the biotechnicians equipped some of the sheep with audio (radio) collars. To date, 12 of the adults and 9 lambs from the original herd and their offspring are alive. Three of these adults and two lambs have moved five miles south to Bloody Canyon.

"The initial mortality of the sheep was high; we lost nine sheep within three weeks of the transplant," Chow said. Two sheep died from accidents; both female lambs climbed to excessive heights in the surrounding mountains where they did not survive the severe weather. Total mortality to date of the original 27 sheep and their young is 20; of these, five are not accounted for. Disease, easily contracted from domestic sheep and to which the bighorn sheep are highly susceptible, has not been a problem. Mountain lions, however, have killed six sheep and the Advisory Group has reluctantly adopted a Lion Predation Program. Since last November, Cal Fish and Game has tracked and killed two lions.

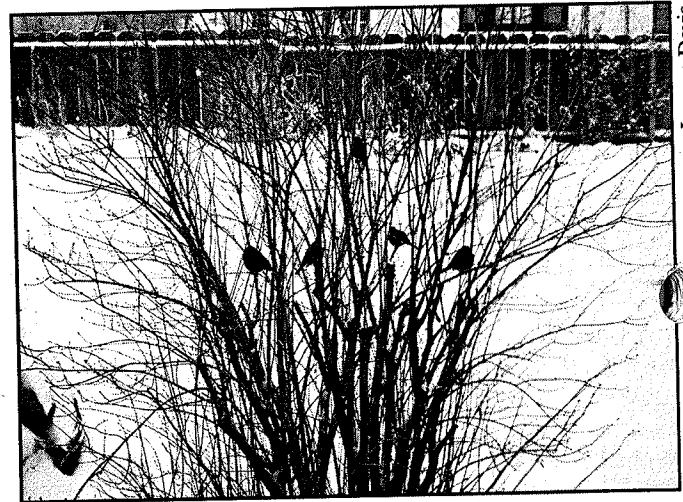
"At the current population level, losing two to three sheep a year is a number the herd can't sustain," Chow said. "Until the herd is large enough to sustain predation, we will have to control lions."

The sheep will probably move into Yosemite from Lee Vining Canyon, but for now the Lee Vining herd remains east of the Park where they have distributed themselves

between Parker Creek, (eight miles south of Lee Vining Canyon) and Lundy Canyon, (five miles north of Lee Vining Canyon.) Since reintroduction, a few rams have briefly entered Yosemite, only to return to the canyon.

The animals are faring well and Chow is optimistic the herd will become self-sustaining. On March 29, 1988, the Advisory Group supplemented the original herd with eight ewes and three lambs which brings the total number of reintroduced Bighorn Sheep living east of the park to 39 and includes two lambs born this July. Chow and his colleagues would like to monitor the herd an additional year before the advisory group evaluates the program. The advisory group has chosen a herd number of 100 for the reintroduction to be a success. If the herd can increase its numbers without human intervention, it will be well on its way to permanence.

Jennifer Scholz



Lauren Davis

## Yosemite Bans Styrofoam

Yosemite Park and Curry Co. is phasing out all polystyrene foam products, commonly known as "styrofoam", in its concessionaire services in the park. The ban will help protect the environment from harmful chlorofluorocarbons (CFC's), chemicals used to produce polystyrene foam products. CFC's damage the earth's ozone layer and contribute to the greenhouse effect that is credited with raising the earth's temperature. Another reason for banning styrofoam products is the unsightly litter they create. The company will replace foam products with reusable, recyclable or biodegradable alternatives. According to Ed Hardy, YPCC president, "American business must take the lead in refusing to purchase products that are harmful to the environment. Despite their convenience or economy, polystyrene foam products should not be used."



## Winter Color

Many quiet transformations take place in the Mono Basin as winter edges into spring. Local resident Meredith Ford describes these changes beautifully in her upcoming book about her life here in the Eastern Sierra. This meadow is south of Lee Vining, between Highway 120 west and Highway 158's north junction.

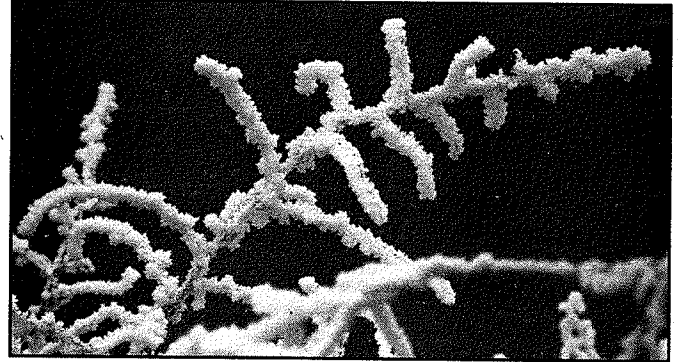
"I want to pull over each car speeding blindly down 395 and make sure the occupants see the old Persian rug the winter landscape has become. Anywhere will do, but the meadow between Upper Horse Meadow turn-off and the north end of June Lake Loop slants upward and so is easy to see from the car.

The meadow is soft, grayed-green sagebrush made lace by rounded clumps of snow. Lighter green rabbitbrush weaves in and out. Running across the rug in a meandering diagonal is the light burgundy of newly-sprouted willow branches fanning out pink against the snow. The gray grandfather branches underneath the pink deepen the line and soften it.

For accents, the normally gray sagebrush trunks, blackened with melting snow, arch and twist like brush strokes

on a Chinese painting. Dark khaki green bitterbrush branches zigzag here and there. Tall, spiky sheaths of wild rye lend an occasional straw color. Creamier tufts of dry rabbitbrush blossoms spread a mute yellow through the white-green pattern. And random, golden patches of sand make this old rug warm.

People who spend the winter waiting for spring's bright splashes of color miss a tapestry subtle, rich, and beautiful."



Larry Ford

## Nineteenth Century Ski Tours

The mining town of Bodie, just twelve or thirteen miles from Mono Lake as the buzzard flies, was known for the wild and reckless recreational activities of its inhabitants. Most were content to pursue these activities indoors—in saloons, gambling houses and the like. However, one young Bodieite was a bit more daring. His exploits are recounted in Warren Loose's book, *Bodie Bonanza*. This newspaper story first appeared in the *Daily Bodie Standard* in December 1879.

Peggy Nicholson

That December a well-known young man about town, who was a clerk and a sports enthusiast to the core, could hardly wait for the first good snowfall. When it arrived a few days before Christmas, his enthusiasm knew no bounds. In his subsequent adventures, by the narrowest of margins, he missed the dubious honor of having the first ride in Bodie's magnificent new *Black Maria*. His exploits, as recorded in the local press of the twenty-third, are as follows:

"...He is better known for his champion connecting snowshoes [skis]. He had learned to use them in a San Jose flower garden. So, he mounted on his new pair at the mine and started down for Main Street. Things went along smoothly for a 100 yards or so, the snow being soft and the descent gradual; but pretty soon, the hill got steeper and the snow comparatively harder. Then the snowshoes acted as if they were bewitched. Starting at breakneck speed, the rider managed to hold his balance for a couple of hundred yards, 'til the snowshoes collided

with the stable. There, he made a flying leap of some 25 foot radius, alighting on the roof and crashing through to scare a pensive cow nearly to death. When the boys came to his rescue and were bearing him tenderly to his lodgings, he said, as soon as he could catch his breath, 'Too smart, too cunning, and write on my tombstone, "He died in a successful attempt to put a skylight in a cowshed." ' "



Main Street, Bodie: Old-timers using skis made by Mono Basin pioneer Lou DeChambeau.

## MLC NEWS AND ACTIVITIES

### *The 1988 Raleigh Los Angeles to Mono Lake Bike-A-Thon*

On August 29, sixty-six eager cyclists gathered in front of the Department of Water and Power offices in downtown Los Angeles before departing on a 350-mile journey—the Raleigh Los Angeles to Mono Lake Bike-A-Thon. For six days they traveled across the Mojave Desert, past Mount Whitney and over some of California's most scenic and rugged terrain to symbolically return water to Mono Lake.

Thanks to the cyclists, their sponsors and many generous MLC members, the Bike-A-Thon has broken all records this year. To date, we've received \$64,000 and the pledges continue to come in.

The Bike-A-Thoners included: Roger & Shelly Backlar, Bill Bloomer, Ken Brummel-Smith, Wendy Calvert, Charlie Casey, Brent Coeur-Barron, Jeanne Cosby-Rossman, Aaron Cox, Martha Davis, Brian Day, Mary Diodati, Michael Dressler, Paul Falkenstein, Bruce Graydon, Helen Green, Michael Green, John Gregan, Navid Haghdan, Craig Hansen, Eric Haskell, Michael Hart, Rich Howe, Robert Jacobs, Katie Kane, David Kaner, Tom Kelsall, Cynthia Keppner, Krishan Khalsa, Siri Dharma Khalsa, Dennis King, Julie Klingmann, Barbara Kniffen, Mark Lawton, Brian Lewis, Susie Lipton, Grant Lindley, Louis Loeb, Geoffrey Lowrey, Tom Lyons, Carolyn McDonell, Jill McIntire, William Mendoza, Brian Posey, Ian Riedel, Barbara & Don Rivenes, Jim Sayer, Anna Schaefer, Chris Schaefer, John Schaefer, Frank Smith, Arthur Sorrell, Ed Spaulding, Larry Spillane, George Tredick, Susan Urquhart, Phil Van Horn, Matt Vining, Bethany Walsh, Jon Webster, David Wimpfheimer, Roland Wissler, Herb Wright and Stan Yurfest. Tony Cosby-Rossman ran from Lone Pine to Mono Lake.

Support vehicle drivers include: Elaine Bloomer, Pamela Braswell, Kimberley Fisher, Paul Green, Geoff

McQuilken, Father Chris Kelley, Leslie Martin, Jim Stehn, and Pete Smith who also took photographs.

Additional help on the ride came from: David Bloomer, Leigh Ann Dressler, Father Chris Kelley, Chris Silvers and John Emmons who photographed the ride.

Special thanks to intrepid volunteers: Kelly Burnette, Nanette Campbell, Brent Coeur-Barron, Michael Dressler, Daniel Dressler, Brian Day, Kimberley Fisher, Craig Hansen, Julie Klingmann, Ian Reidel, Father Chris Kelley, John Schaefer, Rebecca Shearin, Larry Spillane, and Kathleen Yager.

Prizes donated courtesy of Phyllis McCullough of Raleigh Bicycles, Hugh Walton of Pearl Izumi and Marjorie Mires of Gargoyle and Pro-tec Inc. Mono Lake Committee member Lawrie Brown also generously donated gifts from his import store in Putney, Vermont.

In kind donations courtesy of: Brian Maxwell of PowerFood, Inc., Dennis McIntyre of Sparkletts Water, Angus Morrison of Ryder Truck Rental, Tony Kane and James Hansen of Hansen's Natural Juices, and George Golleher of the Boys Markets.

Special thanks to the following supporters: Bob and Greg LeMond, Reno; Anything Goes, Mammoth Lakes; St. Timothy's Episcopal Church, Bishop; St. Augustine's-by-the-Sea, Santa Monica; and the Two Sisters' Restaurant, Inyokern.

### *Bird-A-Thon*

Avid avian enthusiasts searched the skies on September 23 and 24, as part of this year's Point Reyes Bird Observatory/Mono Lake Committee Bird-A-Thon. The executive directors of PRBO and MLC, Laurie Weyburn and Martha Davis, counted together in the Bay Area along with PRBO board members, and hundreds of other intrepid birders.

In the Eastern Sierra, twelve dedicated Monophiles combed the country for birds in honor of David Gaines. The team consisted of Dave's old friends: MLC board member Helen Green, Lina Prairie, David Rice, Paul Green, David Wimpfheimer, Neil Whitehouse, Emilie Strauss, Everett King, Steve Weldon, Curt Sutcliff, Kathy Duvall, and Earl Gann. The search began at Mono Lake County Park and ended there 24 hours later. Unusual birds appeared from many different directions: a Sabine's Gull from northern Arctic waters, a Lark Bunting from the Great Plains, a Roadrunner from the deserts to the south and a Williamson's Sapsucker from the nearby Sierra Nevada. The Eastern Sierra birders were rewarded with a count of 118—almost matching Dave's record of 122 species.

Mono Lake Committee and Point Reyes Bird Observatory members and friends pledged generously, bringing the current total for this Bird-A-Thon to \$47,300 so far.



Father Christopher Kelly beams a benison upon the Bike-a-thoners departing from Los Angeles. Photo by Pete Smith/Viewfinders.

As is the tradition, the proceeds will be shared by MLC and PRBO.

Thanks to Birkenstock, Keith Hansen, Ewan MacDonald, Nature Company, PRBO, REI, Inc., Clinton Smith, Jim Stroup, Ian Tait, and Williams-Sonoma for donating many wonderful prizes.

## Wine Cellar Drawing Raises Almost \$25,000

The Committee's Third Annual Fine Wine Cellar drawing raised almost \$25,000 this spring for saving Mono Lake. Over 300 generous supporters vied for the chance to win one of two wine cellars valued at \$1000 each.

Priscilla Wrubel, Nature Company co-founder, drew the winners' names at a gala reception at San Francisco's French Club on April 22. Bob Wyatt of Berkeley and Phil Marsh of Woodland Hills won the wine cellars.

Highlights of the afternoon's festivities included Wally Marinko's magnificent piano playing and opera singer Ron Dutro's dramatic voice. Executive director Martha Davis spoke about the Lake and its future. Special guests Huey Johnson, former California Secretary for Resources, and Harriet Burgess, Trust for Public Land's regional manager, shared their perspectives on the Committee and Mono Lake.

The drawing couldn't have happened without the hard work and dedication of Robannie Davis, MLC board member Grace de Laet and her husband Rick. Special thanks to Herbert Cerwin for donating valuable California wines and to Gerald Asher for his expert advice on French wine selection. And thanks to all those who bought tickets and made this the biggest drawing ever.



Priscilla Wrubel draws the names of this year's Wine Cellar winners as (left to right) Rick and Grace de Laet and Herb Cerwin look on.

## 1988 Free Drawing

Overwhelming support of the 1988 Free Drawing helped to raise almost \$100,000 for Mono Lake. Congratulations to prize winners:

**Judith McGivney**, Hollywood—Signed Ansel Adams lithograph "Monolith, the Face of Half Dome", Ansel Adams Gallery, Yosemite.

**Dana Weintraub**, Granada Hills—Weekend for Two at Yosemite's Ahwahnee Hotel, Yosemite Park and Curry Company.

**Elaine Stansfield**, Los Angeles—Mono Lake Fall Weekend, Best Western Lakeview Lodge, Lee Vining.

**Dr. and Mrs. Dan Steinberg**, Livermore—\$250 Nature Company gift certificate, The Nature Company, Berkeley.

**Jane Lobel**, Berkeley—Tuolumne River rafting trip, Friends of the River, San Francisco.

**Lynn Tetrick**, Chula Vista—Hot Air Balloon Trip, High Sierra Ballooning, Bishop.

**Tracy Thompson**, Walnut Creek—Cross-Country Ski Weekend for Two, Rock Creek Winter Lodge, Mammoth Lakes.

**Mr. D. Emblem**, Santa Rosa—Brunton Binoculars, REI, Inc., Carson.

**Susan Collins**, Fresno—Orvis Rod and Reel, Orvis, San Francisco.

We'd like to send a hearty "thank you" to all the businesses who donated special prizes to make this drawing a huge success!

## Martha Makes Waves

MLC executive director Martha Davis was a keynote speaker at the California Irrigation Institute's Annual Meeting, "New Waves In Water" this January, in Sacramento. The meeting focused on new developments in California's many water issues. Martha's talk, "Finding Solutions For Mono Lake", was part of the Institute's awards luncheon.

## Mono Lake Weekend

A weekend of birding and tufa-watching is being planned by the San Diego Sierra Club. Participants will leave San Diego on Friday, June 23 and return late Sunday night. The trip will cost \$70, not including food or lodging. Part of the trip's proceeds will go to the Mono Lake Committee. If you're interested, contact Mike Maghakian, 3549 Castle Glen Dr. #205, San Diego, CA 92123, or at (619)565-2642.

## Mono Lake Supporter Honored

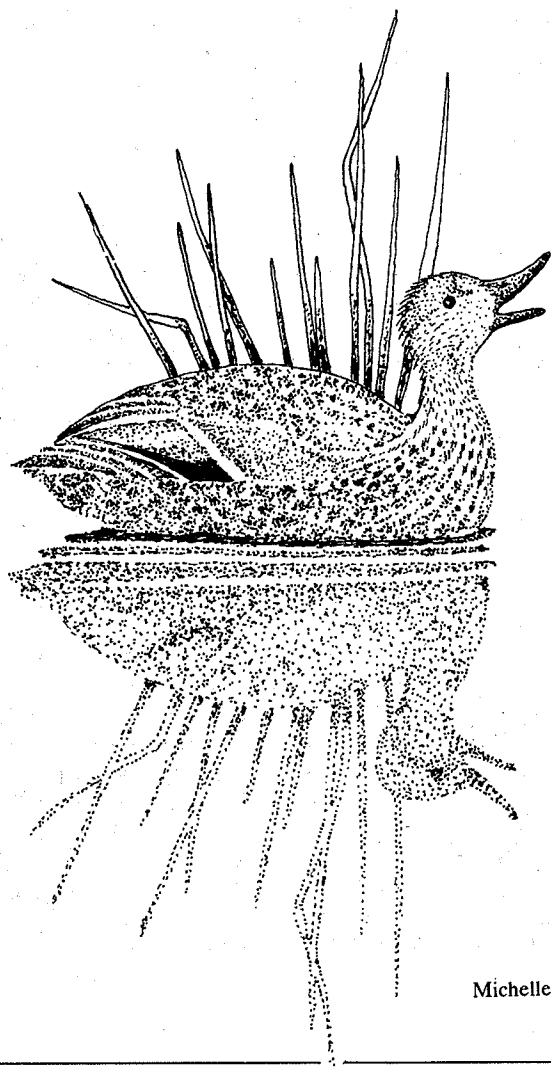
The Golden Gate Audubon Society honored its member and Mono Lake supporter George Peyton this year with its annual Conservation Award. Peyton, an attorney, has used his legal skills many times to help protect the natural world. Currently, he is working on National Audubon's Mono Lake lawsuit.

## Mono Basin Spring Bird Count

Mono Basin's Spring Breeding Bird Count will be held on Saturday, June 10. Everyone is invited to attend regardless of their birding experience. The count circle includes Lundy Canyon, Lee Vining Canyon, and the County Park. Birders will be split into parties to cover these areas.

Please meet at 6 a.m. in front of the Lee Vining Visitor Center. Bring binoculars, water and a lunch. The event will be followed by a potluck dinner and compilation of birds seen.

For more information, call (619) 647-6620.



Michelle Dick



Lee Vining staff and friends, with favorite lake in background, early winter, 1988: Back row, left to right: Melanie Findling, Everett King (intern extraordinaire), Steve Holland, Peggy Nicholson, Ilene Mandelbaum, Dale Johnson (kind-hearted volunteer), and Lauren Davis. Front row: Sally Gaines (MLC Co-Chair), Vireo Gaines (professional kid), Emilie Strauss, Sally Miller and Sage Gaines (full-time kid). Just wait 'till next issue for L.A. Office exposé.

## Staff Hellos and Good-byes

We're pleased to have Betsy Reifsnider join the Committee as Associate Director. She has long been active in Southern California politics, most recently as L.A. City Council member Ruth Galanter's legislative deputy. She was also conservation coordinator for the Sierra Club's Angeles Chapter for six years. Betsy's extensive knowledge of and experience with political and environmental issues will be a tremendous asset to the Committee.

Jennifer Mandel has now moved up from temporary to permanent Bookkeeping Assistant in the L.A. office.

Steve Holland has joined our Lee Vining staff as Visitor Center Assistant. A California native, Steve has been a summer visitor to the Mono Basin all his life. He worked as a Committee intern last summer, where he made his modeling debut in our '89 catalog.

Peggy Nicholson, our new assistant editor, comes to us from Santa Barbara via the bustling ghost town of Bodie where she worked as a park aide this summer. In addition to her talent in newsletter production, Peggy is one of the founding members of the Bodie Ballet Troupe which has performed such classics as "The Dance of the Blasted Tourists."

Daria Walsh joined the Lee Vining office as our stand-in Educational Programs Coordinator. Daria, a past intern, has agreed to fill our EPC vacancy until we can find a permanent staff person. She received her B.A. in Physics from UC Santa Cruz and has been working in computer software design.

We say a sad farewell to intern extraordinaire, Everett King, AKA the Human Gull. Thanks for your year of hard work!





Mono Basin residents dug out their skates and headed for the icy Lundy Lake just before the holidays. Adults, kids and dogs enjoyed the beautiful sheen of the frozen water until heavy snow covered the ice rink. Good fun while it lasted!

## MLC Job Openings

### LEE VINING: Educational Programs Coordinator

The main duties of this position consist of directing an interpretive and educational outreach program while supervising seasonal interpreters and interns. The EPC hires, trains, and supervises interns, coordinates the natural history tours and presentations, and acts as liaison between staff project needs and interns. The coordinator also creates and distributes educational materials and publicity in addition to fielding public inquiries. We need a person with strong interpretive, speaking, writing, managerial and organization skills. Good communication and conflict resolution skills, initiative and ability to work independently are important. Familiarity with IBM computers desirable. This is a full-time position, with a salary range of \$1,000 to 1,400/month commensurate with experience. Vacation and health insurance benefits. Deadline for applications is April 15, beginning date as soon as possible after that. Please send resumes and references to Ilene Mandelbaum at the Lee Vining office. For more information, call Daria or Ilene at (619) 647-6595.

## MLC Board Changes

Welcome to Barbara Blake Levin, who joined our board in November. Barbara has worked in environmental politics for many years. She was a Sierra Club representative in Washington, D.C., and worked to pass the Mono Basin National Forest Scenic Area legislation. She was also Tom Hayden's press secretary. Barbara has a highly respected political sense and a straightforward, no-nonsense approach to dealing with issues. With her exten-

sive political contacts and media background, she is a valuable addition to our board.

The Mono Lake Committee says a sad farewell to Susan Lynn, who has served on the board since 1986. Her outstanding political advice and many other contributions will be missed.

## Accolades

Lee Vining folks thank Bob and Julie Oberlin, siblings of MLC Assistant Information Coordinator Don Oberlin, and Don's friends, John and Rex, for coming to a small gathering in memory of Don and David. Bob Oberlin even helped out in the office during his visit—he packaged over 300 calendars. Special thanks to Kevin Holaday who gave up an autumn afternoon to install carpet in our Lee Vining office. The carpet makes our office a lot cozier in winter. Thanks also to Robert Lausten of the Contra Costa Camera Club who donated two beautiful large, matted photographs. We're grateful to Bob Jellison for his ongoing help in demystifying complex computer functions and letting us use his laser printer. Computer whiz Dan Gutierrez spent a weekend setting up our modem—thank you!

We appreciate Don Jackson for helping us communicate better with the new phone system he installed. Special thanks to Debby and Jim Parker for leading tours and giving sage advice. Our apologies to Everett Rolff who we incorrectly called "Herbert" in our last issue. Everett and friend Dick Branch donated a camera collection. Our staff daily appreciates the beautiful carpentry work done by Greg Esgate in both the L.A. and Lee Vining offices. Christl Findling, your great volunteer work lives on here in Lee Vining. We appreciate the

grassroots support of Denny Mallory, who gave a Mono Lake slide show in the Bay area in November. Thanks to Michael and Nancy Olexo, and Nancy Morita for their architectural and museum advice and editorial support. As always, we appreciate the help of Bug "David" Herbst — scientist, friend, and insulation expert.

## *In Memory*

Thank you to Catherine and James Marron for their gift in memory of Robert Scott Pridham, and to Jeannette Dickens for a contribution in memory of Clara Arsenault. Thank you to Mr. and Mrs. Paul McChesney, Gerry and Mason Emanuels, and Ruth Colby for their donations in memory of Bradley K. Holbrook, and to Gwen and Jerry Fine for a gift in memory of Rob Tillotson. We thank Jane Baird, Carol Alley and Helen Archer for their gifts in memory of Elizabeth Odell. Thank you to Deborah Jory for a donation in memory of Kevin Staydohar.

## *Tom Wrubel 1940-88*

Tom Wrubel, co-founder of the Nature Company, died of brain cancer this past December. Since his childhood near Joshua Tree National Monument, he loved exploring the natural world. His Nature Company stores were designed to help others discover and appreciate it also. Wrubel was a strong supporter of the Mono Lake Committee and Friends of the Earth. The Mono Lake Committee expresses sympathy to his family and friends.

## *HELP!*

Our L.A. office is bursting at the seams. We urgently need more space. Can you help? If you know of available office space or a even a small house, please contact our L.A. staff at (213) 477-8229. We need about 1,000 to 1,250 square feet or more at a very reasonable price.

## *Wish List*

Los Angeles Office: Our slide projector was stolen! We desperately need a slide projector to present the Mono Lake slide show in this area. Small, dry-image copier or combination fax machine/copier in working condition.

Lee Vining Office: Laser printer compatible with Ventura Publishing software. We also need someone who is fluent in German to help edit our special edition of the Mono Lake Guidebook. A donation of headphones would make life easier for our interns, who like to listen to raucous music while doing tedious but necessary jobs. Our Lee Vining office could also use a heavy duty upright vacuum to keep our Visitor Center clean and tidy.

# THE MONO LAKE COMMITTEE

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Dave Phillips ..... Treasurer  
Helen Green ..... Secretary

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Ilene Mandelbaum ..... Eastern Sierra Representative  
Peggy Nicholson ..... Assistant Editor  
Emilie Strauss ..... Staff Biologist  
Daria Walsh ..... Educational Programs Director  
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## *Mono Lake Internships*

Interns work full time staffing our Lee Vining information center, answering mail, filing and researching. We may need an intern for the spring-summer (April-August) and two interns for summer (June-August). MLC can provide housing and a small stipend. For more information, please contact Daria Walsh in Lee Vining.

## MLC Winter Mini-Catalog

### Get your own CONSERVATION KIT!

Help save Mono Lake, and save \$\$ on your water, energy, and sewage bills. We've tested many different water conservation products, and these win our highest ratings.

**Water Saver Showerhead.** The finest quality, high-pressure, chrome plated brass showerhead (with turn-off valve). Cuts consumption by up to 50% (24,800 gallons/year for a family of four!) and reduces annual heating bills by \$100-\$200. Easy to install. **\$14.95**

**Water Saver Kitchen Faucet Aerator.** Swivel head for spray or stream, uses 2-3 times less water than normal aerators. Pays for itself within 55 minutes of hot water use. Dual inside-outside thread design will fit most faucets. **\$6.95**

**Water Saver Bathroom Tap Aerator.** Cuts consumption by up to 50% on your bathroom tap. Dual thread design makes this aerator easy to install on standard faucets. **\$1.95**

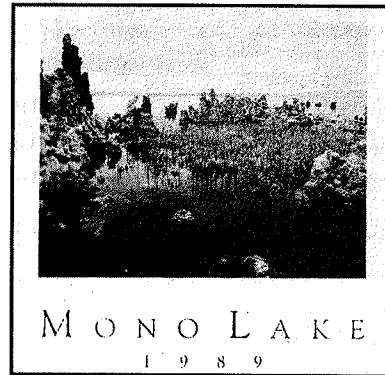
**Water Saver Toilet Dams.** Two high quality brass dams will fit in your toilet, saving 2 gallons per flush—up to

20,000 gallons per year for a family of four! Easy to install. **\$4.95**

**"I Save Water For Mono Lake" Bumpersticker.** Join the proud people who are saving water for Mono Lake. Proclaim your support on your car. **\$.50**

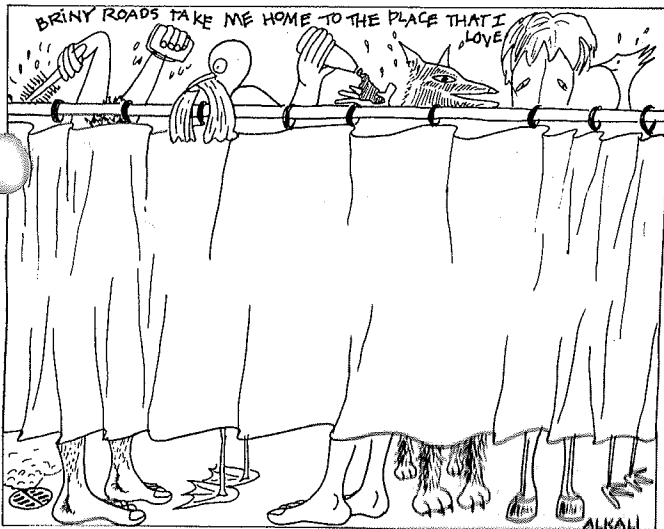
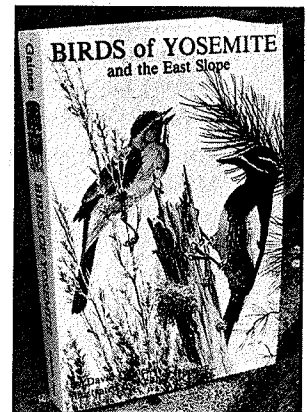
**Two Mono Lake Postcards.** As soon as you install your water conservation kit, write Governor Deukmejian and Los Angeles Mayor Bradley and urge them to save Mono Lake. **\$.50**

Buy the entire Mono Lake Saver Kit at **\$25.00** and save **\$4.30**. Items may be purchased individually.



**Mono Lake Calendar**  
Dedicated to David Gaines, this year's calendar portrays the majesty and moods of the Mono Basin through beautiful color photographs. Sale price **\$7.95**, originally **\$8.95**.

**Birds of Yosemite and the East Slope, By David Gaines.** This was Dave's last book, completed only a month before his death. Keith Hansen's cover painting and drawings are the perfect touch to Dave's glowing prose about the birds he loved so well. **\$16.50**



Make checks payable to the Mono Lake Committee.

☐ Mastercard ☐ Visa ☐ Check

Expires: Month \_\_\_\_\_ Year \_\_\_\_\_

Card No.: \_\_\_\_\_

Signature \_\_\_\_\_

Ship To \_\_\_\_\_

Mailing Address \_\_\_\_\_

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

County \_\_\_\_\_ Phone \_\_\_\_\_

#### California Sales Tax Chart

Contra Costa, Fresno, Inyo, Los Angeles, San Francisco, San Mateo, Santa Cruz ..... 6 1/2%  
Alameda, San Diego, Santa Clara ..... 7%  
All other counties ..... 6%

#### Shipping Rates

up to \$10 ..... \$2.50  
\$10-\$25 ..... \$3.00  
\$25-\$50 ..... \$4.00  
over \$50 ..... \$5.00

<input type="checkbox"/> Conservation Kits: .....	\$25.00
Individual Items:	
<input type="checkbox"/> Showerhead .....	\$14.95
<input type="checkbox"/> Kitchen Aerator .....	\$ 6.95
<input type="checkbox"/> Bathroom Aerator .....	\$ 1.95
<input type="checkbox"/> Toilet Dams .....	\$ 4.95
<input type="checkbox"/> Bumperstickers .....	\$ .50
<input type="checkbox"/> Postcards .....	\$ .50

<input type="checkbox"/> Mono Lake Calendar .....	\$ 7.95
<input type="checkbox"/> Birds of Yosemite .....	\$16.50

Subtotal: .....

CA residents add sales tax (see chart): .....

Shipping (see chart): .....

Donations and Membership: .....

Amount inclosed: .....

For information or to order by phone: (619) 647-6595.



Illustration by Craig A. Hansen ©1989

# MONO LAKE FINE WINE CELLAR DRAWING

Save Mono Lake  
and win one of four  
\$500 Fine Wine Cellars

Only 800 tickets will be sold! Your donation of \$50 per ticket helps the effort to save Mono Lake. The drawing will be held Friday, May 19, 1989 in San Francisco. Your presence or contribution is not required to win. You must be 21 or over to participate.

Those contributing \$100 or more will be entered in a special drawing to win a weekend for two at Mono Lake including:

- Two nights' lodging (donated by the Gateway Motel, Lee Vining)
- Half-day, VIP guided tour of Mono Lake
- Gourmet picnic basket lunch (donated by Anything Goes, Mammoth)
- *Mono Lake Guidebook*, signed by David Gaines

For advance ticket purchase please use Mastercard, Visa, or personal check payable to The Mono Lake Committee.\* Tickets will be forwarded.

Mail to: The Mono Lake Committee  
1355 Westwood Blvd., Suite 6  
Westwood, CA 90024  
(213) 477-8229

## WINE CELLAR NO. 1

1961 Beaulieu Private Reserve Cabernet  
1975 Château Sémecac Haut-Médoc  
1975 Sebastiani Barbera  
1981 Côtes Roussillon  
1982 Cuvée Domaine "Les Roure"  
1982 Collioure

## WINE CELLAR NO. 2

1967 Cordier Château Gruaud-Laroze  
1973 Sebastiani Zinfandel  
1975 Château Sémecac Haut-Médoc  
1976 Sebastiani Pinot Noir  
1979 Sebastiani Cabernet "Served at Banquet for President Mitterrand"  
1982 Collioure

Wine Cellars 1 & 2 donated by Mr. Herbert Cerwin of Cerwin & Peck Consultants, San Francisco

## WINE CELLAR NO. 3

Château Léoville-Lascases  
1955 Château Talbot  
1961 Château Grand-Puy-Lacoste  
1961 Château Branaire-Ducru  
1964 Château Nenin  
1982 Château Gruaud-Laroze

## WINE CELLAR NO. 4

Château Léoville-Lascases  
1961 Château Grand-Puy-Lacoste  
1961 Château Branaire-Ducru  
1964 Château Margaux  
1964 Château Haut-Bailly  
1982 Château Marlarctic-Lagravière

French Wine Cellars 3 & 4 selected by Mr. Gerald Asher, Wine Editor of *Gourmet Magazine*.

\* The Mono Lake Committee is a lobbying organization and greatly needs your direct contribution to support our work. Due to changes in the IRS tax code, donations to drawings such as this are no longer tax-deductible.



THE  
MONO LAKE  
COMMITTEE

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