

A week ago I went down to Sally Gaines' house to take a look at her slide collection. In search of old photos of researchers for this issue of the Newsletter, I was hoping to find a previously-undiscovered quintessential 1970s-undergrad-scientists-at-Mono-Lake shot. As we looked through the slides a story was woven—of camaraderie, open expanses of alkali, bird counts, dry creeks, exposed beaches, bug studies, dust storms, Mono muck, nights by the campfire, deep friendships, life-changing decisions, and creative and resourceful people investigating intriguing questions with compelling answers. By the end of the box of slides the story was complete, and I could see that there were far too many pieces to capture it all in one slide.

But what really hit me was this: 25 years later, we *still* wouldn't be able to take one photo to sum up all of the research happening here. There are all kinds of scientists out and about in the basin—asking questions, piecing together clues, and adding their pieces to the puzzle that was started by the legacy of science before them. Just like the original crew, they are motivated not only by their love of science, but also by their love of this place. Just like the original crew they work collaboratively, and are supportive of new work. Just like the original crew they see how their work can fit into the ultimate goal of restoring ecosystems in the Mono Basin.

The Mono Lake Committee is proud of its scientific roots, and of the science-based policies and decisions that continue to guide all of our work. So, here is a hats-off to the scientists who sat around that legendary fire, and to the ones who continue to keep it alive today.

—Arya Degenhardt, Communications Director



COVER PHOTO BY DAVID GAINES

JOHN DITTLI

This photograph, *Impending Storm, South Tufa*, is just one of the many spectacular photographs by local photographer John Dittli on display at the Mono Lake Committee Information Center and Bookstore this summer. The show, entitled *Wild Places*, features images of the Eastern Sierra and the Great Basin.

### Mono Lake Committee Mission

The Mono Lake Committee is a non-profit citizens' group dedicated to protecting and restoring the Mono Basin ecosystem, educating the public about Mono Lake and the impacts on the environment of excessive water use, and promoting cooperative solutions that protect Mono Lake and meet real water needs without transferring environmental problems to other areas.



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## MONO LAKE

### NEWSLETTER

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# The Revolt of the Bird-Watchers

*On the Scientific Roots of the Mono Lake Committee*

*An Excerpt From the Book Storm Over Mono*

by John Hart

*It is a place where the grand processions make you acutely aware of being alive on the planet. You watch the passage of moon, sun and stars over the knife-edged horizons, and the jagged shadows of evening reaching beyond the lake into Nevada and the sky beyond. You watch the birds in their arrivals, departures, and intricate ceremonies and stalking grace, and you take comfort from such order and cyclical permanence. It is hard to watch this spectacle crumble to dust.*

—Gray Brechin, 1976

## The Ecological Study

Early in 1972, on the Davis campus of the University of California, a student named Sally Judy saw an ad in the student newspaper: “Bird Freaks Unite!” The author, drumming up membership for a student-run birding course, was one David Gaines. Sally Judy wasn’t a bird freak—yet—but she turned out for the course. That casual decision changed her life.

Two years later, Gaines and Judy were a couple and staying at his parent’s condominium in Mammoth Lakes. Gaines, who had just earned his Master’s degree in ecology, was doing a quick inventory of Mono County for the California Natural Areas Coordinating Council. He was instantly captivated by Mono Lake and alarmed by the changes he saw taking place there. Sally, for her part, was not an enthusiast at first sight: “I didn’t see enough of the lake to be impressed.”

In 1975 Gaines was commuting between posts at Davis and at Stanford and talking up Mono Lake to students and friends on both campuses. One of these contacts, Jefferson Burch at Stanford, got word of something amazing: a federal program of research grants for undergraduate science students, called Student Originated



California Gull research on Mono’s islands.

encampment they sang, recited verse, lived largely on granola, beans, and rice and were known to take in other nonstandard substances. But if you’d expected no results from such an outfit, you couldn’t have been more wrong.

The study group made an orderly survey of the Mono Lake environment, building from the physical basics to the subject they knew would prove central: the birds.

## Flocking to Mono

Though people had long been remarking on the numbers of birds at Mono in summer, no one as far as the students knew, had made a systematic count. (They were unaware of Walter Dombrowski’s waterfowl estimates in the 1940s.) It’s not hard to see why so little had been done. The lake was large. The flocks were vast. Some species spread over the whole lake surface. Others were secretive. All moved around. And why try to count birds at a doomed lake, anyway?

By car, by boat, and on foot, the group carried out five “all-lake censuses.” Heading out at dawn with “mist nets,” they trapped shorebirds. Perching on tufa towers (a practice later frowned upon), they panned binoculars and telescopes over miles of water. Boating

Studies. Why not a study of Mono Lake? With Gaines’s encouragement, Burch and two friends, Christine Weigen and David Winkler, worked up a proposal. To their astonishment, the \$20,000 grant came through.

In 1976, the dozen members of the Mono Basin Research Group assembled in Lee Vining. David Gaines was on hand but not on the official, all-undergraduate roster. Most of the group camped out on a ranch on Dechambeau Creek near the northwest corner of the lake. (Landowner Jan Simis, a member of the local Friends of Mono Lake organization, had the welcome sign out for researchers.)

Looking at the group, you might have pegged them just as local folk certainly did: belated hippies, sixties kids in the wrong decade. In the Dechambeau

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Researchers crossing dusty alkali flats near Black Point.

to the islands, they inspected the gull colonies on Negit minutely, doing their best not to disturb the birds (spooked gulls will abandon eggs and young, and the neighbors tend to turn cannibal). They skimmed around the lower-lying islets by canoe and gave them names like Twain, Muir, Java, Pancake, and Little Norway.

When the figures were added up, they showed maximum populations, on any given day, of several thousand American Avocets; 22,000 Red-necked Phalaropes; 93,000 Wilson's Phalaropes; and three-quarters of a million grebes. All these totals were more or less surprising. The gull counts, 46,000 birds, with 38,000 on Negit and 8,000 on the islets—were ten times higher than most earlier visitors had guessed. The impressive phalarope counts were completely unexpected. The group also made an important addition to the breeding-bird list: they spotted, for the first time, Snowy Plovers nesting on the remote east shore.

The most numerous species, the Eared Grebe, was an obvious target for close study. But the grebes, who favor open water, floated maddeningly out of reach. "We never caught a grebe," David Winkler recalls, "and we weren't willing to shoot one." The group did make a useful compilation of old grebe knowledge and confirmed Mono Lake as their major habitat in the western Great

Basin, as Great Salt Lake is in the eastern.

The Wilson's Phalaropes were almost as frustrating. By the time the group had mastered its shorebird-netting skills, *Phalaropus tricolor* had headed south from the Mono Basin. That left available for study the Red-necked Phalaropes and the gulls.

By sticking straws down the gullets of captured birds and extracting samples of the stomach contents, the students learned that Red-necked Phalaropes chiefly eat alkali flies—adults, pupae,

and larvae. The students tried to estimate how far these migratory birds could fly from Mono by gauging their fat supply. This can be done by simply killing and boiling up the bird, or more humanely, as they did, through an elaborate computation based on weight and length of wing. The students concluded that the Red-necked Phalaropes left Mono fat enough to make it at least to the Salton Sea and perhaps to the Gulf of California. But they also concluded that Mono Lake was a mere stopover point for this species, not, as it is for the Wilson's Phalarope, a vital last staging area before a heroic flight.

Because gulls regurgitate food for their chicks, it was no trick to check what they had in their crops: brine shrimp. Later research would suggest that gulls, like phalaropes and grebes, do in fact prefer alkali flies when they can get them; the more abundant brine shrimp appear to be the fallback, the staple.

The gull census had shown Mono Lake to have the world's second largest breeding population of the species; only Great Salt Lake harbored more. The group speculated that Mono gulls might be different from other groups of *Larus californicus*, a separate flock returning to this lake only, as salmon strains return to their natal streams. "If the gull colony at Mono Lake collapses," David Winkler



Researchers gather for a lunch break in a spot now covered in water.

suggested, “it will mean the demise of a population which ... is, in all probability, unlike any other in the world.” This idea seemed plausible, but Winkler’s own later work would prove it flat wrong: *Larus californicus* is *Larus californicus*, wherever found.

Before the Ecological Study, Mono was vaguely acknowledged as a lake with a lot of birds. After the study, incomplete as it was, Mono had to be recognized as habitat of the first importance. Over the years this recognition would only grow.

What would continued lake decline mean to these species? Possible problems were loss of nesting sites for the gulls, diminished food supply for all species, and physical stress from intake of salt water.

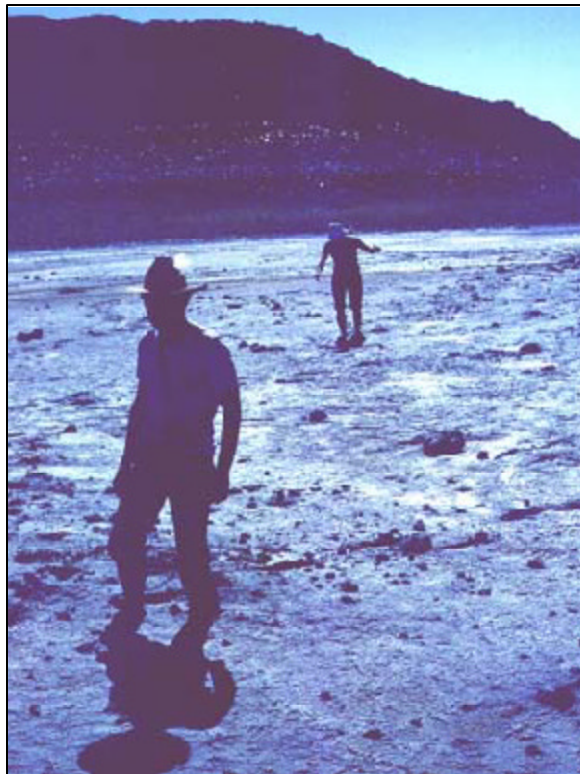
The Negit Island nesting ground would plainly go fast. In September of 1976, with the lake surface at 6,378 feet, the single remaining strait across the land bridge was less than a yard deep. In two years, maybe one, coyotes and other predators would cross. Could displaced gulls find room on the islets east of Negit, or might they move over to Paoha? The researchers couldn’t say. In the long run, though, all existing islands, even Paoha, would be bridged; and though new ones would undoubtedly poke out of the water, the total available habitat would shrink dramatically.

### **How low can you get?**

To assess what would happen to avian food supply, the researchers had to figure out just how low, and thus how salty, the lake would get. Those answers come out of a formula called a water balance. In essence, it is like a personal budget. The lake has a certain natural income, mostly from creeks and from rain that falls on its surface. It has an unavoidable expenditure, in the form of evaporation. It has a bank account, the water in the lake itself. When the evaporation expenditure is greater than the liquid income—as it has been in most years since 1941—the bank account shrinks and the lake falls.

But getting from the simple theory to a practical formula is no easy task. For one thing, most of the numbers, including evaporation rates, are estimates. Only the larger streams are gauged, and the gauges are not near the shore. Every Mono Lake water balance model makes its own simplifying assumptions; every model must be tested against the historical record; every model must be tricked out, in the end, with an extra, arbitrary factor to bring it into line with the facts observed.

Compared to previous efforts, the



David and Sally Gaines make their way through the Mono muck on the land bridge.

Ecological Study water balance, prepared by team member Robert Loeffler of Stanford, was quite sophisticated. Its results, though, lined up with predictions made as far back as 1934 by the Department of Water and Power. It suggested that if diversion continued at the recent clip of 100,000 acre-feet a year, the lake would wind up fluctuating around a level of 6,323 feet, it would have about half of its 1976 surface area, and it would contain less than a third of its 1976 volume. The model foresaw a lake almost four times as salty as it was in 1976 and seven

times as salty as the sea.

How would alkali flies and brine shrimp do in this shallow, shrunken lake? Gayle Dana and David Herbst went to the lab at Lee Vining High School, boiled down lake water to produce brews up to three times as salty as Mono Lake vintage ’76, and put shrimp and fly larvae into them. The shrimp began dying massively as salinities approached double the then-current level of about 88 grams to the liter. Fly larvae did not die but went into a kind of dormancy; at concentrations above double, they seemed unable to move into their next life stage, pupation.

The sensitivity of Mono shrimp was a surprise. Brine shrimp from some other lakes can live in waters so full of salt that any additional chemical precipitates out as a solid. However, these “foreign” shrimp can’t live in Mono water, which is charged not only with table salt but with sulfates and carbonates as well, nor can Mono shrimp live in the “foreign” waters. These and other differences would eventually lead the Mono Lake shrimp to be declared a separate species, *Artemia monica*.

Might Mono shrimp acclimatize to a saltier lake? Dana and Herbst doubted it, and later researchers have concurred. Saltwater creatures, it appears, have just a few methods for getting rid of salt and carbonate; with little natural variation, there’s not much for natural selection to build on.

At what lake surface elevation would concentrations become lethal? The Ecological Study didn’t try to pin this down, but later researchers would put the last-gasp surface elevation somewhere between 6,350 and 6,360 feet above sea level. As it sank toward that range, Mono Lake would be impoverished and probably subject to unpredicted disruptions; below it, the lake would indeed approach the state of a Dead Sea.

Without shrimp, no gulls and grebes.

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Without flies, no phalaropes. Though these bird species would hardly go extinct without Mono, the loss of the lake would be a serious blow. Just how serious remained for later research to show.

The 1976 workers flagged a third threat to the birds: stress on their systems from too much salty water, ingested with their food or in their food, as the body fluids of prey species grew more salty. This idea was to prove controversial; certainly such an effect would set in only when the lake became very salty indeed.

On quite another subject, the 1976 study asked what would happen, over time, to the alkali flats exposed by a falling lake. Would vegetation close over them? Or would they remain barren indefinitely, giving rise to plumes and clouds of dust? Preliminary studies suggested that vegetation was slow indeed to colonize this flat and poisonous environment, and that dust storms could only get more severe as the alkali rim expanded. “Three months of field work,” the report concluded, “could uncover only the beginning of an answer to the question of how water diversions are going to affect the lake and its basin.” The authors made no outright recommendation but observed, “To maintain Negit with a five-foot buffer zone, no more than 25,000 acre-feet could be taken” per year. That would be only a quarter of what Los Angeles had recently been diverting.

### **The Mono Lake Committee**

One night, staring into a campfire at the Simis Ranch, the Ecological Study group realized they were on the hook. Their study done, they decided, they could not walk away. They would have to do something to prevent the losses they saw coming. They would have to make an attempt to save Mono Lake.

This story has been told, but told

always secondhand. No one seems to have sat before that fire. What we have here is a foundation myth, a metaphor for what indeed occurred, but in a more gradual, less tidy way. Certainly no one in the original student group felt like organizing a campaign. Most of them were headed back to campuses that fall. But four do figure largely in the continuing story of Mono Lake.

Two of the four, Gayle Dana and David Herbst, pursued their interest strictly as researchers. Over the next few years Dana would make herself the preeminent expert on the Mono Lake brine shrimp, and David “Bug” Herbst would become the scientific proprietor of *Ephydra hians*.



David Winkler would follow them into pure research, but first he, with David Gaines, would launch the Mono Lake Committee.

Back at UC Davis, Winkler spent much of his senior year pulling together the Ecological Study results; Gaines helped get them into print at the Institute of Ecology there. Late in 1977, David Gaines and Sally Judy moved to the redwood region of Northern California to serve as naturalists on a Nature Conservancy preserve; Winkler spent a season doing fieldwork for the California Department of Fish and Game.

In November of 1977, when the lake surface was approaching 6,375 feet above sea level, Winkler made another

visit to Mono. There he did something no one could have done in over seven hundred years: traversing the freshly exposed land bridge, he walked to Negit Island. “I didn’t even get very muddy doing it.” The gulls had returned to the ocean for the year, but what would await them in May, when they next came inland to breed?

That was the real “moment by the fire.” Winkler felt impelled to get something going, and “it wasn’t going to happen,” he remembers thinking, “unless we could get David Gaines out of the woods.” He trekked north to the Northern California Coast Range Preserve. Gaines agreed to see what he could do.

But Gaines and Winkler still hoped to be spared the task of founding an organization. Instead, they turned to existing outfits: Lajoie’s Sierra Club Mono Lake Task Force; Friends of the Earth; and the Natural Resources Defense Council. There was a meeting at David Brower’s home. All were sympathetic. But Lajoie was now pulling back from this particular fight, and no other party thought it wise, just then, to take up the Mono cause. They would cheer; they would give advice and even some

money; but they wouldn’t be the ones to pick up and carry the load. There was nothing for it: the new Mono advocates would have to organize on their own. ❖

*John Hart is the author of Storm over Mono, the definitive work on the Mono Lake story. He immersed himself in the facts, figures, stories, and waters of Mono Lake to bring the book to completion. He has authored several other books on environmental issues including Farming on the Edge: Saving Family Farms in Marin County, California.*

# Mono's Scientists

## *A Portrait of Five Committed Researchers*

by Geoffrey McQuilkin

**T**hink back to 1976. Next to Mono Lake, under starry night skies a dozen or so undergraduate scientists camped out along one of Mono Lake's small tributaries. By day they fanned out across the lake and basin, conducting the first comprehensive ecological study of the lake.

Through scientific inquiry, the team discovered far more than had ever before been known about the impacts of decades of water diversions on the lake. They also discovered the trends that foretold the lake's approaching ecological collapse.

The science produced the knowledge that generated the effort to save Mono Lake. Due to what science found, National Guard helicopters settled down on exposed landbridge loaded with crew and explosives to detonate the landbridge. Due to what science found, the impact of unfettered water diversions on Mono Lake was undeniable in the court case that wound up in the California Supreme Court. Due to what science found, a solid core of knowledge about what Mono Lake is, was, and could be underlay every letter writing campaign, public policy effort, and solution proposal.

Several researchers came before the 1976 group and many more followed. Numerous scientific inquiries have expanded the factual framework for understanding Mono Lake's ecology and the destructive impacts of excessive water diversions, adding to the astonishing wealth of knowledge about this astonishing place.

As the Mono Lake Committee celebrates its 25th anniversary, five scientists deserve special recognition. Their work, their commitment to the truth, and their ability to take science to the courtroom, the public, and the State Water Resources Control Board have forever altered the fate of the special place we call Mono Lake.



*The gang at the State Water Board hearings on Mono Lake in 1993. From left to right: Dave Herbst, Peter Vorster, Scott Stine, attorney Bruce Dodge, Dave Shuford, and David Winkler.*

### **David Winkler**

**Meeting Mono:** David Winkler first saw Mono Lake on a spring birding trip totally unaware that he would soon be back studying those bird populations in detail. In the fall of 1975, David met Jefferson Burch on SE Farallon Island, and soon after Jefferson suggested that together with Christine Weigen they collaborate on a grant proposal to get National Science Foundation (NSF) undergraduate research money to study Mono Lake, a location David Gaines had introduced them to the previous summer during research internships in the nearby Slate Creek Valley. Gaines had been mentoring Winkler in birding circles in Davis, and when the three met to discuss the grant, much of it was hatched in Gaines' living room. Thus was born the 1976 summer of research, the first Mono summer for so many scientists.



*Wink weighing a gull.*

**The work:** Wink did foundational work both scientifically and for Mono Lake's protection. He edited the '76 group's report and soon after took a year off to try to do something about the landbridge that was fast approaching Negit Island and the great majority of Mono Lake's nesting California Gulls. By winter, he had talked to enough people in the government and NGOs to realize that something more organized about Mono's future needed to be done, so Wink journeyed to the Northern California Coast Range Preserve of the Nature Conservancy to spur David and Sally Gaines into action. And thus, in the kitchen of the Preserve's managers, the Mono Lake Committee was born on a wet winter night in early 1978.

After working with the Committee for its first few months (he still remembers the first newsletter, the creation of the grebe logo, and the first bumper sticker on Gaines's old Plymouth), and getting the National Guard to blow a trench through the nascent Negit landbridge, Wink went off to pursue his Ph.D. at Berkeley, ultimately spending four years of dissertation work living with and studying the gulls of the Negit islets to try to understand why the Mono gulls lay only two eggs, instead of the more normal three laid elsewhere (it's all about the availability of food in early spring).

Wink recalls that the grad school years, punctuated as they were by court testimony and disagreements with DWP and its consultant, Joe Jehl, were challenging. But he learned a great deal about conservation biology and his Mono expertise carried through to, ultimately, the State Water Board hearings

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in 1993. His one regret is that his deep friendship with Gaines was cut short by David's death before they had time to resolve years of struggle between advocacy and science.

**25 years later:** Wink is now Professor and Curator of Birds in Cornell University's Department of Ecology and Evolutionary Biology. For over 15 years he has been studying Tree Swallows, semi-colonial songbirds that conveniently nest in nest boxes and, he points out, lack the discouraging gull habit of eating their neighbors' offspring. He remains committed to Mono Lake and the lessons that it has to teach us, and currently chairs the Mono Science Council and advises Justin Hite in his gull studies at the lake (see page 11 for more).

**From another perspective:** During that 1976 summer of research, most of the twelve-odd undergrads camped along upper Dechambeau Creek. Three researchers named David made things too complicated, and so it was there that the Davids niche-shifted their names: Winkler reverted to his childhood "Wink," Gaines stayed "Dave" (though the group was tempted by the "Dagwood" that sprung from his initials), and Wink stuck Dave Herbst with the simple moniker of "Bug."

### Dave Herbst

**Meeting Mono:** Walking down a hallway at UC Davis, Dave Herbst's future was forever changed when he saw a flyer calling for researchers to join the Mono Lake Ecological Study crew. He spent the summer of 1976 sleeping under the stars and conducting, by day, the first comprehensive invertebrate inventory of the lake and shoreline wetlands and springs (the bone-dry streambeds weren't on the list for obvious reasons).

**The work:** After a summer looking at the invertebrate big picture, Dave focused his microscope onto alkali fly (*Ephydra hians*) research, quickly becoming *the* expert on alkali flies at Mono Lake. As one of the two basic elements of the food chain, it was clear that the fate of the alkali fly was also the fate of Mono's birds. In his graduate work at Oregon State, Dave teased out the physiology and population ecology of the fly and compared it with other salt lakes. His postdoctorate work carried on with the ultimate experiment: the "microcosm" studies. Bug simulated various lake levels with 130-gallon tubs of fly habitat and Mono Lake water concentrated to different salinities, creating, as he says, "a time machine that revealed the past and projected future for the alkali fly." The studies proved both that lower lake levels harmed the flies and that higher lake levels would increase their productivity. Eighteen years later, Herbst's testimony before the State Water Board was crucial to the understanding of Mono's impending collapse. "I had no worries about testifying," says Bug, "because I knew I had the truth in my hands."

**25 years later:** Bug leads studies today that track the health



Bug and the microcosm studies.

of Mono's alkali flies, and he advises the Committee on scientific matters as a charter member of the Mono Science Council. Based at the Sierra Nevada Aquatic Research Laboratory just down the road from Mono Lake, much of his salt lake ecology work is now focused on Owens Lake, where shallow flooding to control dust is creating an amazing density and diversity of invertebrates. He also is deeply involved with bioassessment, a technique of determining water quality in streams and lakes by measuring resident insect diversity and health, and related stream ecology studies.

**From another perspective:** Wink remembers many Grateful Dead-inspired campfires from 1976, with Bug wielding a Weir-like guitar and delivering the pleading, declarative vocals of the old stand-bys. And his poem in the 1977 report, says Wink, is still one of the best pieces of writing about the lake anywhere.

### Peter Vorster

**Meeting Mono:** Peter passed by Mono on many a childhood camping trip and first spent time at the lake when one of those Sierra trips was snowed out in 1968 (a precursor to the extremely wet winter of 1968-69, hydrologist Vorster is quick to point out). Subsequent visits for fun and study



Peter Vorster jumping to Negit Island.

led Vorster to push for Mono's listing in the 1978 *California Water Atlas*, which he was helping write, in the "Unresolved Questions" chapter. He connected with David and Sally Gaines at the "Save Mono Lake" booth at the Friends of the River Confluence in 1979. The need for expertise was obvious and Peter enthusiastically laid out his hydrology credentials and knowledge of the LA aqueduct system; on the spot he had a new job and was soon on the road to Lee Vining.

**The work:** "Mono Lake," Vorster says, "was a classic case of applying science to a conservation need." Vorster's work was both in the science and in the applying. His press release helped recruit a media circus for the second go at blowing up the Negit landbridge. From organizing crowds for public meetings to printing Mono Lake T-shirts and calendars, Peter and his unstoppable energy were involved. At the same time, he began to put his technical knowledge to work; a state task force looking at the Mono issue, it turned out, got its numbers and options from DWP. Vorster used his knowledge of the Los Angeles water system to present the other side. When the Mono Lake lawsuits began in 1979, Voster focused even more on the technical, initially developing the blueprint for replacing Mono diversions by managing DWP's supplies more efficiently and then developing what is still the authoritative water-balance model for Mono Lake, detailing where Mono's water comes from and where it goes. Vorsters' complex 15-variable equation allowed him to analyze DWP's own aqueduct operations, lake-level projections, and diversion scenarios, giving Mono advocates control of information that allowed them to consider the effects of any potential change in diversions. Peter, his work, and his jack-of-all-trades

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enthusiasm have been part of every single court or water board hearing on Mono Lake in the past quarter century.

**25 years later:** Peter consults with the Committee as a hydrologist and is working on the North Mono Basin water allocation process, stream restoration, and aqueduct operational review. He is an active member of the Mono Science Council and volunteers—he points out—as the Committee’s chief malcontent and institutional historian. Most of his time goes into forging new frontiers of water resource protection in California through his hydrological work at The Bay Institute on San Joaquin River rewatering (using the court precedents established in the Mono Basin) and Bay Delta protection.

**From another perspective:** “Peter has always been so eager and full of energy,” says fellow scientist David Winkler. And in one of those strange quirks of life, that energy almost ended up on the other side of the table. Looking for an outdoor job in a beautiful setting, Vorster had applied to DWP for the Mono Basin hydrographer position. He aced the test but missed the interview, and the rest is history.

### **Scott Stine**

**Meeting Mono:** A field class brought Stine to the Mono Basin in 1973 where he found a landscape that offered an irresistible variety of features, from volcanoes to glaciers to the Sierra itself. As a graduate student at Berkeley he visited again in 1979. There David Gaines informed him that, supposedly, Mono Lake had been very low in the mid-1800s. In fact, DWP was using that supposed low stand to argue that their diversions were simply mimicking the recent natural history of the lake. Stine, suspicious because of his knowledge of climate history, tore into the issue, and showed that the supposed low level was a historic fabrication.

**The work:** Through the lake level investigation Stine saw that the rise and fall of Mono Lake could be used as a climate indicator. His doctoral dissertation, unabashedly titled “Mono Lake: The Last 4000 years,” unraveled the mysteries of Mono’s fluctuations—and found answers about the ages of the tufa groves, the ages of the islands, and the history of the north-shore dune field, among other things. A geomorphologist of unending energy, Stine can give you the story behind nearly every landscape feature in the Mono Basin. When and how was Negit Island created? How old are the towers at South Tufa and why were they formed? Through hundreds and hundreds of days of Mono Basin fieldwork, Stine answered the critical Mono Lake questions. How did Rush and Lee Vining creeks work, back when they had water? What happens to the landscape when Mono Lake rises and erodes the shore? What was it about Mono Lake that supported a million waterfowl back in pre-diversion times? Stine challenged the Committee to think beyond the lake to the then-dry streams. He asked questions and gave the answers, again and again, in great detail before courts, the public, and the State Water Board.



*Scott Stine testifying for Mono Lake.*

**25 years later:** Now-Professor Stine is still free-ranging in his inquiry into the landscape—in California and the Great Basin, as well as in Patagonia and Alaska. Some Mono work continues, leading to a much anticipated book on the history of the basin. His work on California’s climate history and epic droughts has challenged thinking about the state’s water resources. Recently he’s taken up a new vein of inquiry: the history of exploration and discovery. A question turned to an inquiry and turned to an investigation, leading Stine to trace Joseph Walker’s 1833 route across the Sierra—not through Yosemite, as the old campfire story had it, but rather through the Carson, Mokelumne, and Stanislaus drainages.

**From another perspective:** Known for his inexhaustible energy and tendency to stay nourished with a thermos of tea for breakfast and two full entrees at dinner, Stine covers more ground and hunts down more answers in a day than many others can do in a week. Winkler recalls that Stine “with his penchant for extreme exercise and vigorous interaction” was a whirlwind unlike any other researcher; “he was just flat out driven by this intrinsic fire about Eastern Sierra Quaternary history.”

### **Dave Shuford**

**Meeting Mono:** Dave Shuford came to Mono Lake from Point Reyes Bird Observatory (PRBO) after a visit from Gaines and Winkler, who were looking for an expert to continue the gull research. Shuford remembers asking, “who wouldn’t want to spend the summer in the field at Mono Lake?” Not that there weren’t some serendipitous connections: years earlier, as it happens, he had arrived at UC Davis as an undergraduate and found a spot to live in a house with, among other students, Sally Gaines.



*Dave Shuford banding a California Gull.*

**The work:** “Shuf” and PRBO took over the gull work when Wink left for postdoctoral work and replaced Wink’s more general focus on gull life history with a reproductive success focus on precise estimates of gull numbers. The count methodology Shuf developed made it possible to tally the gull population size and annual breeding success. The counts dramatically revealed the importance of Mono Lake as the second-largest California Gull rookery in the world—and its continuing vulnerability to destruction by mainland predators as the lake level fell. The gulls have played such a major role in the resolution of the Mono controversy that the monitoring data and framework that Shuf put in place remains a key part of the Committee’s ability to intelligently advocate for the well-being of the Mono ecosystem.

**25 years later:** Over the course of twenty years monitoring Mono’s gulls, Shuf has also documented the importance of wetlands throughout California (Klamath Basin to the Salton Sea) and the West (Pacific Coast to Rocky Mountains) to a variety of waterbirds, particularly shorebirds and colonial nesting waterbirds (pelicans, cormorants, gulls, terns). Shuf

*Continued on page 10*



chaired the Mono Science Council for the first four years of its existence, and he remains an active member, lending his broad regional understanding of bird distribution and conservation issues. He works closely with Committee staff on the waterfowl habitat restoration required by the State Water Board.

**From another perspective:** West Coast bird experts gravitate toward the Point Reyes Bird Observatory, and those fortunate enough to work there take up residence in the small neighboring towns. Shuford found himself living in Bolinas, an enclave noted for its liberal tendencies, and DWP attorneys on several occasions grilled him not about birds, not about biology, but about his residence, neighbors, and friends. The questioning was always cut off as irrelevant.

### Many Others

Many other scientists have been part of that investigative effort, building a deep understanding of Mono Lake. Before the 1976 team's time, four scientists stand out.

Israel Russell arrived on horseback in 1881, studied the lake and glacial history of the mountains over several years, and published his seminal report in 1889. Fisheries biologist Elden Vestal roamed Mono's tributaries starting in 1938. He extensively documented the natural conditions of Rush Creek and their destruction as diversions commenced. Vestal produced his meticulous notes in the 1980s as a star witness on prediversion conditions. David Mason studied the lake in 1961, performing a detailed chemical analysis and examining both biological and physical phenomena. He tried to raise concern about the lake's decline but found that, beyond local concern, the lake had been written off as doomed. Geologist Kenneth Lajoie dissected the geological strata of the lake in the 1960s, revealing past lake fluctuation. Lajoie also saw where Mono was headed and got the Sierra Club involved on the lake's behalf (though without ultimate success) via Inyo County water litigation.

The 1976 research crew ushered in a new wave of scientific interest. Individually, the scientists revealed critical aspects of Mono Lake's ecology, then most moved on to new challenges.

Gayle Dana studied the Mono Lake brine shrimp intensively, revealing the shrimp's response to increasing salinities and the unique attributes that distinguish it from other brine shrimp species. Now a glaciologist at the Desert Research Institute in Reno, she's moved her focus to frozen lakes of Antarctica. Gayle's partner in exploring Mono's limnology, Connie Lovejoy, is now studying the microplankton of polar waters at the Université Laval in Quebec. Bob Loeffler did work on the hydrology of the Mono Basin, and his work was the foundation for Vorster's model. He is now Alaska's Director of Mining, Land and Water. Jefferson Burch and Christine Weigen put in many days at the lake, and moved on to professional careers and marriage; Christine is a physician for Planned Parenthood and Jefferson is an engineer for Agilent. Elliot Burch,

Jefferson's brother, was also part of the 1976 team and now teaches high school science in the Northeast. Brett Engstrom, another of the bird crew in 1976, went on to the University of Vermont, and now works on rare plants with the Nature Conservancy. Botanist Dean Taylor worked with the crew here and there and with the Mono Lake Committee in the early years,

providing the younger biologists with plenty of Latin names, and he is now a botanical consultant working out of the Jepson Herbarium at UC Berkeley.

John Harris hung

out with the 1976 crew and then, as a graduate student at Davis, did his thesis on kangaroo rats and mice interactions on Mono's east shore; he's now a professor at Mills College. Evan Sugden tied in through undergraduate connections to the '76 crew and did valuable early work on bee ecology, completing his Ph.D. at Mono; now he is an instructor in entomology at the University of Washington.

A flowering of researchers and expertise has followed; far more individuals than can be listed here

have furthered our understanding of the Mono Basin. But were it not for these early researchers and young students, out to understand a special place just a bit better, we might indeed have nothing left to study at all. ❖

*Geoff McQuilkin is the Committee's Co-Executive Director. He is working on a home-made field guide to birds of the Mono Basin for his daughter Caelen.*



*Top: The Daves, Shuf, Wink, and Bug, on top of a peak. Middle: Stine and Vorster get to the bottom of Mono's questions. Bottom: from left to right: Gayle Dana, Peter Vorster, Dave Shuford, David Winkler, and Dave Herbst kick up their heels.*

# Long-term Study of the California Gull Population at Mono Lake Continues

**B** iologists have studied the California Gull (*Larus californicus*) population at Mono Lake every year since 1979. Under the direction of Dave Shuford of the Point Reyes Bird Observatory and David Winkler of Cornell University, researcher Justin Hite has been conducting the study since 1998, and will continue the work in 2003.

The objectives of the ongoing study are to measure year-to-year variation in population size and reproductive success and to determine their relationship to changing lake levels. The effects of changes in the Mono Lake ecosystem are of special interest both to biologists as well as to public agencies charged with protecting the lake's valuable natural and scenic resources. Protection of the Mono Lake ecosystem requires the lake's surface elevation to rise to an average of 6392 feet, and there is a continuing need to monitor the lake's resources, including nesting gulls, to document their responses to the changing

conditions. Currently Mono Lake is coming out of a six-year period of meromixis, where the lake's water is stratified—with fresher water on top, and saltier water trapped below. In this condition nutrients essential for algae production are trapped far below the surface—where the alkali flies and brine shrimp, which are the primary food source for the gulls, need the food to grow and multiply.

## **Nest Count Results From 2002**

In 2002, nest counts estimated that 45,716 adult California Gulls were nesting at Mono Lake in late May. Before Los Angeles Department of Water and Power water diversions began in 1941, the majority of gull nests were on Negit Island. In 2002, just under 2% of Mono Lake's breeding gulls were on Negit Island roughly 81% were on the Negit Islets, and 17% on the Paoha Islet complex. The number of nests on Negit Island rose from 271 in 2001 to 391 in 2002.

An estimated 26,827 young fledged

from all the lake's nesting islands in 2002, continuing a third year of high reproductive success. During a prior six-year period of meromixis in the 1980s, gull nesting success was low the first two years but increased thereafter. During the current period of meromixis gull reproduction was extremely low for four years, followed by three years in which it was above average. This trend suggests a recovery similar to that in the 1980s and is consistent with observations that the lake's stratification is eroding more rapidly than initially projected (see Winter 2002 *Newsletter*).

Gull studies will continue this summer, adding another important piece to the puzzle that documents the restoration of Mono Lake. ❖

*Information in this article was compiled from the study: Population Size and Reproductive Success of California Gulls at Mono Lake, California in 2002 by Justin M. Hite, Elizabeth O'Hara, Tricia Wilson, and Melissa T. Hite under direction of PRBO Conservation Science.*

**A** downed powerline was the ticket to a feast. A fierce wind toppled a utility pole near the Lundy power plant on April 24, igniting a tremendous brush fire that swept northeastward, jumping Hwy 395 and incinerating 800 acres in the north Mono Basin. Human habitat was spared, barely. Some birds fared worse, notably, one to a half dozen American Magpie nests along Wilson Creek succumbed along with their host willows. The fish suffered the most. Approximately 20–30 thousand small trout were killed in rearing ponds along Wilson Creek due to ash settling into the water.

The fire went and the birds came. Walking the charred north moraine at the entrance of Lundy Canyon a couple days after the burn there were a multitude of birds to be seen. Lingering and scattered among the charred skeletons of bitterbrush and sage were American

Robins, White-crowned Sparrows, Spotted Towhees, Brewer's Blackbirds, Red-winged Blackbirds, and Mountain Bluebirds. Some of the first Green-tailed Towhees of spring were probing the green margins of the fire scar. Red-shafted Flickers and Hairy Woodpeckers scrutinized the badly burned cottonwoods along the return ditch. There were far more birds around this denuded moraine than you would expect to find on any given, fully-foliaged day. Did the fire expose a wealth of seeds? It seemed too cold for insects to be out. A search on the ground and found only scorched rocks, dirt and charcoal.

Reports from below the moraine indicated the birds were discovering food—30 American Pipits foraging in the burned meadow. The dead fish attracted a regular convention of eager scavengers. Perched among ice age tufa mounds and

## Fire of Plenty

by Bartshe Miller



willows, Snowy and Great Egrets, California Gulls, and Turkey Vultures, all had arrived for a banquet of wildfire trout. These fish had been destined for the photos and bellies of fishermen. Fire intervened, and served them up smoked for the birds.

# Mono's Tributary Streams as Songbird Habitat

## *What is the Appropriate Measure of Restoration's Success?*

by Sacha Heath, PRBO Conservation Science

*Editor's note: High on the list of current and exciting research happening in the Mono Basin is the Eastern Sierra Riparian Songbird Conservation Project. PRBO Conservation Science (PRBO) has been investigating riparian bird populations in the Eastern Sierra since 1998, with projects encompassing the Owens River, Mono Lake, Hammil Valley, and the West and East Walker River watersheds (see Spring 2000 Newsletter). Primarily designed to examine habitat relationships and the effects of land management and restoration efforts on breeding birds, the study begins early enough in the spring to investigate migrant populations as well. Since the project's inception, PRBO has documented bird use of Lee Vining and Rush creeks in the Mono Basin. In 2000, efforts intensified so, now, on almost any given day between May and mid August, you can find a biologist moving quietly through the willows or fording one of Mono's tributaries. Here, Project Director Sacha Heath describes some of the results of their efforts.*

Since 1999, there has been little change in breeding bird species diversity on the lower reaches of Rush or Lee Vining Creek (Figure 1). Generally speaking, most noticeable change in breeding bird diversity and species abundance occurs over the first 5 or so years of a restoration effort—when the habitat is in a rapid stage of development and transformation. After this initial burst of new breeding birds, the rate of addition of new species or individuals decreases and more subtle changes may occur in the breeding bird community. PRBO is monitoring the effects of restoration over ten years after the initial return of water to and removal of livestock from Mono Lake's tributary streams. Subtle changes

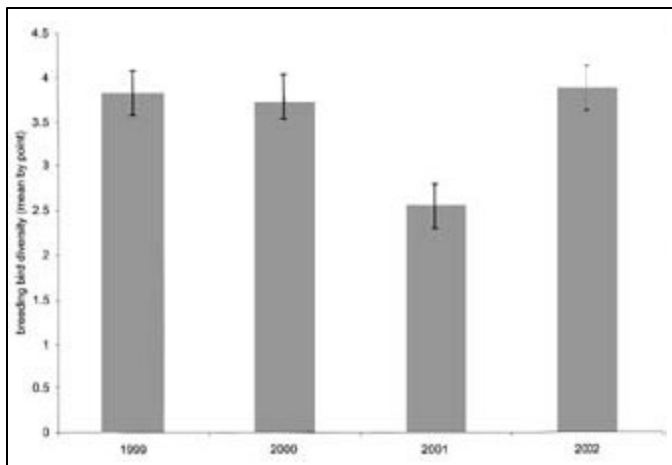


Figure 1. Mean breeding bird diversity for species detected on point count censuses, Lee Vining and Rush creeks, 1999–2002.

in the bird community are probably not as detectable by standard indices of species diversity, or in the relatively short period of time as four years.

However, as riparian herbaceous and shrub cover increase, and black cottonwoods change from saplings to trees, biologists are witnessing a slight change in breeding bird composition. In 2001, PRBO first detected nesting Willow Flycatchers on lower Rush Creek, this after a prolonged period in which Willow Flycatchers had been absent as breeders (see Summer 2001 Newsletter). In 2002, researchers documented two nesting pairs of both Warbling Vireos and Western Wood-Pewees on Lee Vining and one Warbling Vireo pair on Rush Creek. These are the first confirmed breeding attempts of these high canopy nesters on PRBO's nest searching plots since the projects' initiation in 2000, and may reflect the increasing canopy heights on the restoring creek's lower reaches.

Another of the most striking results thus far is the discovery of the most abundant nesting population of Yellow Warblers documented in California. This State Species of Special Concern is one of the most common warblers in North America, but regions like the Central Valley and the Lower Colorado River have seen the dramatic decrease and near extirpation of this species primarily due to loss of riparian habitat. The Lee Vining Creek and Rush Creek Yellow Warbler populations, however, appear to be thriving. Since 2000, PRBO has found over 360 Yellow Warbler nests along 2.6 miles of Lee Vining and Rush Creek combined. Rush Creek in particular harbors the densest Yellow Warblers yet documented. Figure 2 depicts 65 Yellow Warbler territories in a just under 1-mile stretch of Rush Creek's bottomlands in 2001.

### *Is Density Enough?*

In 1983, prominent wildlife researcher B. Van Horne wrote an important paper entitled "Density as a misleading indicator of habitat quality." Van Horne made the point that judging the quality of a habitat purely on the numbers of wildlife individuals or species that occupy that habitat may in many cases be inappropriate and not a precise enough measure.

By finding and monitoring nests and banding and recapturing individuals over several years, PRBO will be able to assess the "health" of Mono's abundant Yellow Warbler population. Productivity (nest success, number of young produced); survivorship (the likelihood of a Yellow Warbler living from one breeding season to another); recruitment (the addition of new Yellow Warbler adults into the breeding population); and potentially juvenile survival (the likelihood of a Yellow Warbler born in the Mono Basin to live through its first year) are demographic factors that we can investigate to

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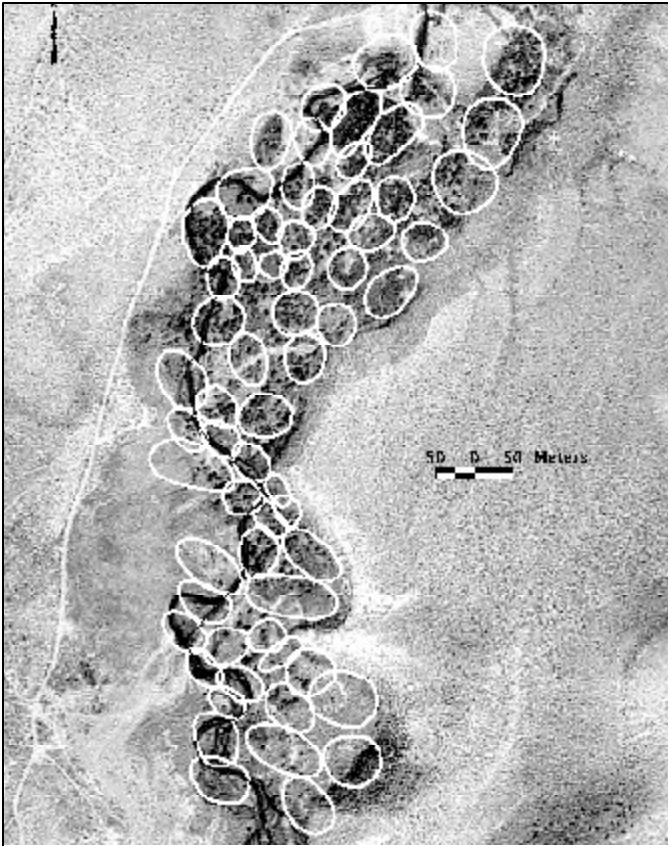


Figure 2. Yellow Warbler territories on Rush Creek, 2001

determine whether Mono Basin's riparian stream habitat is acting as a Yellow Warbler "source" or "sink." In other words, are Mono's Yellow Warblers producing enough young to outweigh the costs of adult or juvenile mortality, and is productivity related to the quality of the habitat?

Around 30% of Yellow Warbler nests are successful at PRBO's study plots—and as an isolated measure of success, can be considered around average. (A nest is considered successful in this case when it fledges at least one young of its own kind). But what happens to the other 70%? In 2002, the

leading cause of Yellow Warbler nest failure was predation by mammalian, reptilian or other avian species (Figure 3). This year, PRBO will place video surveillance cameras on Yellow Warbler nests to determine what animals are preying on their nests. These efforts will represent the pilot year work for graduate student Quresh Latif, who has been working on the Mono Basin project as a PRBO Biologist since 2001 and who expects to be in the Basin until around 2008!

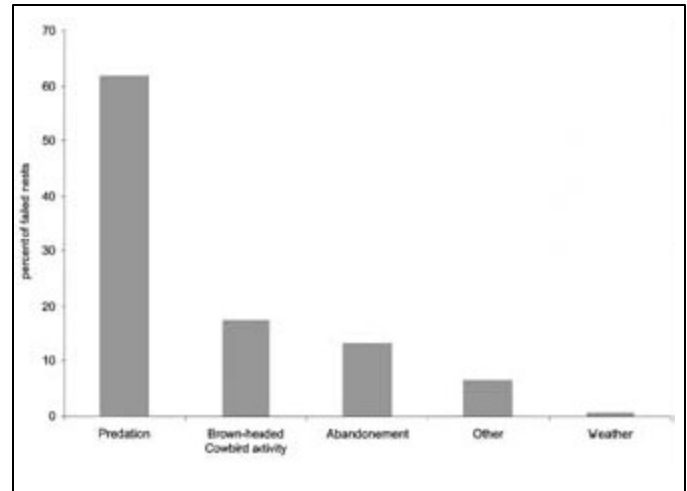


Figure 3. Causes of nest failure for 121 failed Yellow Warbler nests, Mono Basin, 2002

An anticipated result of all of this work is to provide information to land managers and restoration efforts and assist in making informed management decisions. In the Mono Basin, this type of interaction is made possible by the collaboration between PRBO and several federal, state, county and city agencies, non-governmental organizations and other researchers. ❖

*Sacha Heath of PRBO Conservation Science has been studying riparian songbirds and their habitats in the Eastern Sierra since 1998.*

## Bird Migration in the Basin

*by River Gates, PRBO Conservation Science*

The annual spring migration of birds is an exciting time of year for naturalists. A long and quiet winter is relieved by a burst of new plant growth and colorful migratory birds returning from their southern wintering grounds. Early spring is characterized by the Mono Basin's resident birds trying out their songs and calls—often times releasing the strangest noises. Spotted Towhees and Song Sparrows can be found scouting out their territories to find their perfect singing perch. In early May, as the riparian trees are beginning to leaf out and insects become abundant, the Basin is swarmed by eager migrants on their way to their northern breeding areas. Migrants typically stop over in food-rich habitats to refuel for the next leg of their journey. In the Mono Basin, shorebirds and waterfowl use the lake's food-

rich waters while songbirds stop and sometimes stay to breed in the recovering riparian streamside or upland sagebrush habitats.

For three years, PRBO Conservation Science has been banding birds on the four tributary creeks of Mono Lake. From May to mid-August PRBO researchers operate mist netting and banding stations at each creek. Bird banding is an important long-term research tool that allows biologists to monitor the increase or decrease of bird populations over time. Information on timing of productivity, adult recruitment, and survivorship can be gleaned from several years of banding efforts at one location. PRBO methods are standardized in accordance with national monitoring protocols to allow comparability between simi-

*Continued on page 17*

# Special Half-Day Field Trips

*A Fitting Way to Celebrate the Mono Lake Committee's 25th*

*by Sally Gaines*



**L**et's get in the way-back machine and go back to the summer of 1978 when we first lead field trips at Mono Lake. This summer we will be reenacting the original half-day tour: starting at Mono Lake County Park at 8AM walking down the boardwalk to the shore, then caravanning to Panum Crater for a short hike to the rim, then motoring

down to South Tufa area for a canoe paddle and a dip, finishing up by 1PM. And if you'd like to stick around, we'll head over to the Mono Cone for lunch.

Some things will be different from 25 years ago. Walking down to the muddy shore at the County Park we'll be on a wooden boardwalk and the tufa mountain we sat on to birdwatch is now an island. The highway passes over formerly desiccated creeks that now sing with water and life. South Tufa has a parking lot, interpretive signs, pathways and a restroom.

In 1978 these free field trips were our way of introducing people to the lake. The area was little known in those days: no signs, no State Park, or Forest Service Visitor Center. We realized in order to save the lake, it needed a bigger and well-informed constituency, so we

invited people to come learn first hand about geology, botany, and natural and unnatural history.

Back then we were camping, so you had to mail in your reservation. Nowadays, we have phones and email, so make reservations soon, as group size is limited. Wear walking shoes, sun hat, bring a snack, water and swim togs for a float in the brine. Contact Events Coordinator Shannon Nelson ([shannon@monolake.org](mailto:shannon@monolake.org)) at (760) 647-6114.

Tour dates are June 28, July 27, August 23, and September 14. If you were on a tour in 1978, please join me again to share your reminiscences—and if you missed the tours back then, here's your chance to catch up! I look forward to seeing you. ❖

## Mono Basin Sage Grouse Listing Denied But Conservation Planning Could Restore Sagebrush Habitat

*by Greg Reis*

**S**age Grouse are a fascinating game bird native to sagebrush habitats in the Great Basin. Populations of these birds have declined throughout their range, mostly due to habitat loss and degradation.

Since May 14, 1999, seven petitions



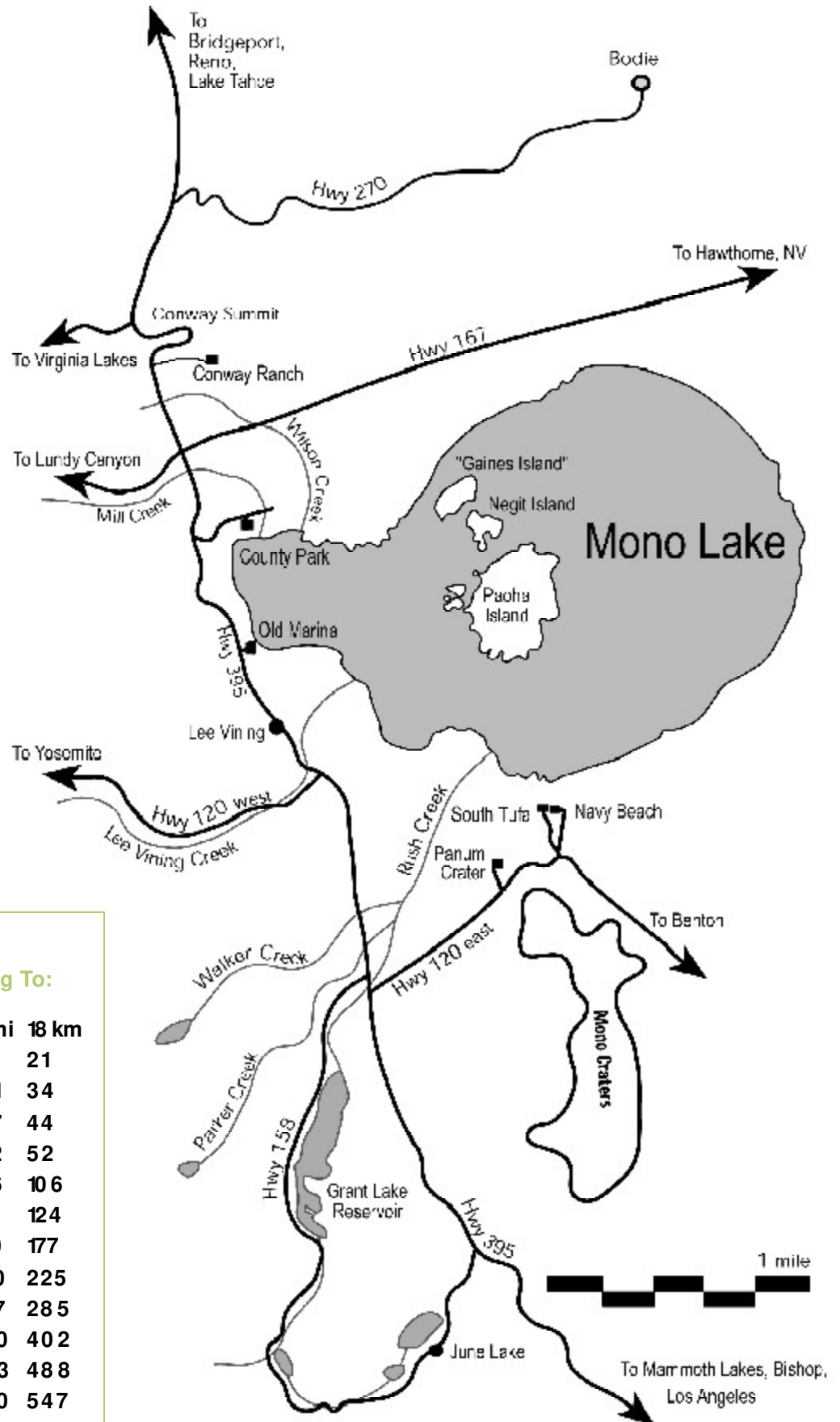
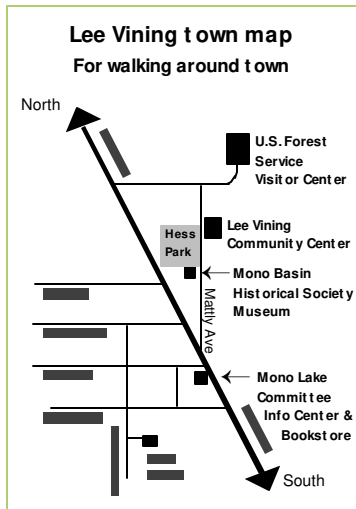
have been submitted to the U.S. Fish and Wildlife Service to list various populations of Sage Grouse as threatened or endangered. On December 28, 2001, the Institute for Wildlife Protection submitted a petition to emergency list what it called the "Mono Basin population of the Greater Sage Grouse." Most local biologists who work with the birds agree that is an inaccurate term for the population, since most of the populations in the area also occur outside the Mono Basin. The largest population is in Long Valley, and while not enough research has been done to establish the relationships between the populations, some genetic distinctiveness has been found.

The Fish and Wildlife Service published a "90-day finding" in the Federal Register on December 26, 2002 that the information

presented in the petition for the "Mono Basin Population" was not substantial. For other populations, one other petition resulted in the same determination, two resulted in Candidate Status, and two have had no determinations due to insufficient funds. A March 19 submission based on two prior ones has not yet been decided upon.

The Mono Lake Committee, local agencies, and other stakeholders are participating in a bi-state conservation planning effort initiated by the State of Nevada. The goal is to develop a plan that has targeted conservation strategies for each population. Regardless of the population's name or legal status, this effort has the potential to initiate restoration and better management of upland sagebrush habitats in the Mono Basin.

# Mono Lake and Vicinity Map



## How far is it?

### Distance From Lee Vining To:

South Tufa .....	11 mi	18 km
Yosemite Park entrance	13	21
Tuolumne Meadows .....	21	34
Mammoth Lakes .....	27	44
Bodie .....	32	52
Bishop .....	66	106
Yosemite Valley .....	77	124
Lake Tahoe .....	110	177
Reno .....	140	225
Death Valley .....	177	285
San Francisco (via 120) .....	250	402
Los Angeles .....	303	488
Las Vegas .....	340	547



# New Motorized Boat Tour Permit Underway

*Committee Applies Principles to Determine Acceptability*

*It's All About Avoiding Impacts*

*by Geoffrey McQuilkin*

A proposal to conduct daily guided tours of Mono Lake by motorboat has challenged both the Committee and California State Parks to independently determine if such a tour can be done without significantly impacting the lake or visitor experience. Through careful and comprehensive rules and requirements that are consistent with the Committee's lake protection principles, the answer is yes.

The issue is a challenging one. On the one hand, motorized boats have a long travel range and a greater potential for disturbing the migratory and nesting birds for which Mono is so important. And boating at the volume of, say, Lake Tahoe would certainly have ecological impacts and would permanently alter the scenic solitude that is so central to the Mono Lake experience.

On the other hand, motorboats are used for wildlife viewing and sensitive ecological studies. A small number of motorboats have been on Mono Lake for decades. And guided tours are substantially different from the free-for-all scenario that a motorboat rental operation raises.

The analysis, in the end, cannot be based simply on whether a tour boat has a motor hanging off the end. Tours are planned and controlled by the operator and, with or without motors, can, and must, be designed carefully to be low impact activities. Even low impact craft like canoes and kayaks can become high impact lake users when present in great numbers or in sensitive places. It is the specific activities and ecological impacts of a tour that need to be analyzed.

The Committee has approached the issue from the perspective of the lake. Two years ago, staff developed a set of principles regarding boating. In the past year, we've talked to scientists, agency

staff, and the tour operator and measured commercial boating proposals—including our own canoe tours—against those principles. The Committee's goal is to protect the lake while encouraging people to experience and learn from it. As Mono Lake Committee Co-founder Sally Gaines says, "when done responsibly, getting people on the lake to see it first hand builds dedicated protectors of the lake."

The Committee's principles are that boating activities should not produce:

- significant ecological impacts on the lake and wildlife;
- cumulative impacts through multiple small operations;
- loss of solitude, scenic views, and other qualities that make up today's unique Mono Lake experience;
- a departure from the long-standing recreation policy of focusing visitor use at key sites, leaving the rest of the basin open for individual exploration;
- safety problems, given Mono's dangerous winds and record of boating fatalities.

This specific tour proposal, made by local resident Tom Crowe, is for up to four tours per day on a motorized low-profile, eight-person boat he originally used for wildlife surveys in Alaska. The tours would be educational, focusing on wildlife viewing, natural history, and photography, and would travel from the west shore to South Tufa and, when allowed, Mono's islands. "The lake," Crowe offers, "can only really be appreciated when looking out from a boat at the shoreline, enjoying the grand view of the mountains."

Committee staff have worked with both Crowe and State Parks, which issues permits for commercial operations, to understand the proposal and advocate principle-based changes. The proposal is

now well defined with clear boundaries and protection provisions included, allowing the Committee and science advisors to feel comfortable with it proceeding.

Numerous provisions in the permit protect the lake ecosystem. Buffer zones around stream deltas, nonfocal visitation sites, and County Park would limit impacts in sensitive areas. Maximum tour lengths, shoreline no-wake zones, and an east Mono Lake no-tour zone would address resource impacts. The use of a quiet four-stroke motor limits water and noise pollution. Numerous requirements address safety concerns.

Concerns about "opening the door" to numerous motorized tours have been raised and addressed through State Park's policy of capping the number of motorized tour permits to be issued at one.

To assure permit compliance and to watch for unanticipated impacts, a State Park ecologist will monitor commercial operations on the lake. The monitoring will be underwritten by a nominal per-passenger fee.

In fact, the Committee's canoe tours and Caldera Kayaks' kayak tours are also being reviewed and permitted by State Parks this year. Committee staff have looked at them both using the same set of principles. No significant concerns have been found with the current operations, which were already subject to a number of Forest Service permit requirements, but State Parks is setting consistent regulations across the board. For example, the maximum number of canoe and kayak commercial permits is being set at two.

State Parks is completing its environmental analysis of the motorboat, canoe, and kayak tours as this Newsletter goes to press and will be accepting comments through June 13. Please contact Craig ([craig@monolake.org](mailto:craig@monolake.org)) at the Committee at (760) 647-6595 with any questions. ❖

# Water Policy 2003 Legislation

by Frances Spivy-Weber

The California legislature will be enacting legislation on issues that are important to those of us who want to see water supplies stretched to meet the needs of people, the economy, *and* the environment. Below are two bills on which I will be keeping close tabs. Given the lead time for the newsletter and the often daily changes in legislative drafts, I cannot be precise about what will be the state of the following bills when you read this. Feel free to contact me ([frances@monolake.org](mailto:frances@monolake.org)) for the latest information, and if action is needed, check the Mono Lake Committee website at [www.monolake.org](http://www.monolake.org).

Senate Bill (SB) 21, sponsored by Senator Mike Machado, will create the statutory framework for implementing Proposition 50, the \$3.44 billion Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 that California voters approved in November. Senator Machado, Chair of Agriculture and Water Resources Committee and volunteer Chair of the "Yes on Prop 50" Committee, is committed to creating an implementation framework that encourages competition among water agencies and organizations for funding. His goal is to see the project dollars spent as wisely as possible.

There will be money for improving drinking water quality and cleaning up beaches and streams. Prop 50 funds will encourage greater integration at the statewide and regional level. For example, if new landscape watering devices reduce the amount of water used on lawns (conservation), they should also

reduce runoff into streams or storm drains (water quality), reduce green waste, reduce energy consumption and create a water supply reserve that could be used for restoring local habitats or habitats further away like Mono Lake or the Bay Delta. Prop 50 will also make major investments in coastal watersheds and wetlands. Given the state's precarious fiscal situation, SB 21 is the vehicle that will likely allocate most of the money for water issues that will be available over the next two to three years.

Assembly Bill (AB) 306, sponsored by Assemblywoman Christine Kehoe, the Sierra Club, and Natural Resources Defense Council, will mandate water metering in all urban communities by January 1, 2008, and meter-based billing by January 1, 2009. The communities that will be most affected by this bill are Sacramento and other Central Valley communities that have local ordinances that forbid metering or using meters to bill customers. The time has come for this bill, and I am optimistic about its passage. The wild cards are the amendments. The ones I have heard so far are extending the deadlines; offering low-interest loans and grants to agencies where installing meters is not locally cost-effective; and directing the California Public Utilities Commission to allow investor-owned utilities to include the cost of meter installation in their rate base. ♦

*Fran is the Committee's Co-Executive Director. She's excited to see migrant birds traveling up the coast past her home in Redondo Beach.*

*Continued from page 13*

lar sites and to allow for the contribution of our data set to a national database. This information is then provided to land managers to better inform management actions, by basing them on bird population trends and patterns, or measures of bird population health.

Some results of last year's banding effort at Lee Vining Creek demonstrate two contrasting patterns between migrant and breeding bird populations (Figure 1). Common migrant species include Wilson's and Audubon's Warblers, Hammond's, Dusky, Western and Willow Flycatchers and Swainson's

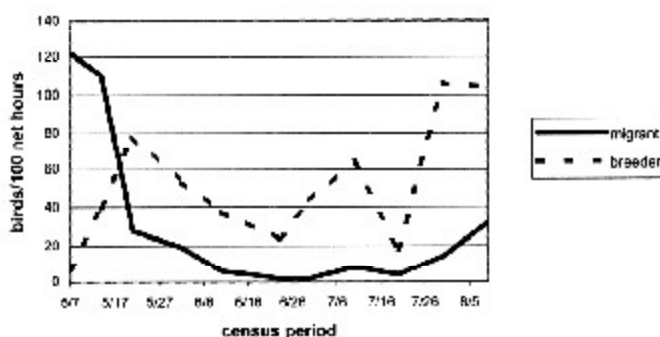


Figure 1. Bird captures at Lee Vining Creek banding station, May 1–August 15, 2002.

Thrushes. Migrant numbers peak in mid-May and drop quickly with a slight rise in numbers again in late summer. This pattern demonstrates the late spring pulse of northbound migrants and the late summer southbound migration. We predict that if we continued to band in late August we would see the trend of migrant numbers continuing to rise as adults and their fledglings head south. The continual capture of at least a few migrant species throughout the breeding season demonstrates late or early migrants, or the dispersal of birds that nest at higher elevations in the Mono Basin into Lee Vining Creek's lower reaches.

Common breeding species include year-round residents Song Sparrows, Bewick's Wrens, and Spotted Towhees and migrant species Yellow Warblers, Green-tailed Towhees, and Bullocks' Orioles. The late-May peak of breeding birds denotes the arrival of migrant birds that stay at Lee Vining Creek to nest and raise young. A sharp increase in early July and again in late July shows the dispersal of family groups and the breaking down of territories as the short breeding season comes to a close.

We look forward to continuing our fourth year of monitoring the recovery of Mono's tributaries in 2003, and will continue to contribute our findings to the larger knowledge base of the Mono Basin's spectacular ecology.

## Grant Lake Reservoir at Lowest Level Since 1995

by Greg Reis

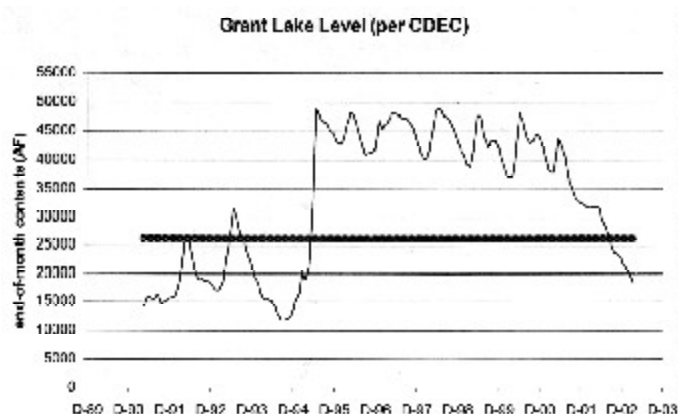
The Los Angeles Department of Water and Power's 2003 runoff forecast for the Mono Basin is 74% of average. Despite one of the wettest Aprils on record, the forecast didn't change much between April and May, although the extra water should help keep Mono Lake from dropping as much. Mono Lake dropped 0.3 feet between April 1, 2002 and April 1, 2003.

Grant Lake Reservoir is the lowest it has been since 1995, which could prevent the Grant Lake marina from operating this year. Low runoff is part of the reason, but there's actually much more to the story. The Water Board order calls for DWP to "attempt to" manage Grant at a level suitable for marina operations, but two aqueduct operational procedures have worked against that goal.

According to the plan, the water diversion load should be shared between Mono Lake tributaries; 6,000 acre-feet of the 16,000 acre-feet of water the Los Angeles Department of Water and Power (DWP) exports each year should come from Lee Vining Creek (Parker and Walker contribute in dry years). Our analysis shows that 11,000 acre-feet of this water was available since Grant stopped spilling in 2000. Over the last three years, however, almost the entire 16,000 af came from Grant Lake Reservoir with virtually no contributions from Lee Vining Creek. There's a reason for this: the diversion structure on Lee Vining Creek doesn't automatically keep a minimum flow in the creek, so it is easier for DWP to just pass the inflow instead of diverting water and monitoring it daily. Lee Vining Creek has benefited by receiving its entire flow, but the method of operation has caught up to both the creeks and Grant Lake Reservoir this year. Rush may not get its peak, and Grant is short the 11,000 acre-feet.

The second factor is that DWP released more water to Rush Creek in minimum flows than was required. Even after subtracting the water "saved" by not releasing peak flows (see Summer 2002 *Newsletter*), this adds up to around 2,000 af of water. What seems to have been overlooked by everyone involved was that the minimum flow required for Rush drops at certain inflow thresholds. The lower minimums require DWP to keep daily track of the inflow and change the outflow match, a practice now implemented.

In the end, if water management had gone according to the State Water Board's order during the last three years, Grant would be about 13,000 acre-feet fuller, and high enough for the marina to operate. The take home message is that bringing operations back on plan is the answer for Grant's predicament. The Committee, the



Dates on bottom are December of each year. The horizontal line is the level the Grant Lake marina needs to operate.

marina operator, and the Forest Service have been working extensively with DWP to do just that.

You usually don't hear the Mono Lake Committee complaining about streamflows being too high, but there are some good reasons to follow the Water Board's plan. The most obvious, of course, is that Grant Lake Reservoir is higher, and the marina can operate. But along with a higher Grant Lake goes a greater opportunity for an early reservoir spill in wet years, which means a higher restoration flow for Rush Creek, and a better-timed peak for cottonwood seed dispersal and germination. At the opposite end of the spectrum, in the driest of years, a higher reservoir allows higher baseflows in Rush Creek and easier water management. When Grant hits its minimum operating level of 11,500 acre-feet, the inflow is passed downstream, which can be as low as 12 cfs (instead of 31). Also, DWP is not required to release a stream restoration flow down Rush Creek if it would cause the reservoir to drop below that level. Managing water according to plan allows Lee Vining and Rush creeks to share the burden of water exports. And for Mono Lake, although the plan would have kept more water in the reservoir and released less to Mono Lake, Mono Lake would only be about a quarter foot lower if the plan had been followed. The Water Board order has a lot of good thinking and solid science behind it and should be followed.

With an "Awesome April" and a wet beginning for May, it is possible that the situation might improve. If we are lucky, the Grant Lake Marina might be able to operate and Rush Creek might get a significant peak flow. And in the future, everyone will be keeping a closer eye on diversions, even if it means noticing that too much water is going down the streams. ❖

*Greg Reis is the Committee's Information Specialist. He has been taking his back country skiing to new heights, including Excelsior Mountain this season!*

6417'

Prediversion lake level, 1941

6392'

Future lake level (average)

6382'

Current lake level

6372'

Historic low, 1982



# Mono Basin Journal

## A Roundup of Quiet Happenings at Mono Lake

by Geoffrey McQuilkin

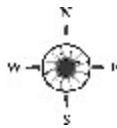


Many mysteries lurk at Mono Lake, and one recently crawled across my hand. A small tan spider, no more than a quarter-inch in size, made a quick trip from finger to finger and then disappeared back into the grey pumice pebbles that mark the lake's 1999 high water mark. A closer look revealed dozens of arachnid compatriots in and among the small stones. What might they be doing there, what do they eat, and who eats them? The questions are easy to ask, the answers harder to find. Mono Lake natural history lore offers little help. Mono expert entomologist Dave Herbst can give you a day's briefing on the developmental phases of alkali flies at the lake, but as to the spiders there was not much to be said; they are, he responded philosophically, "another Mono mystery awaiting the eye of science."

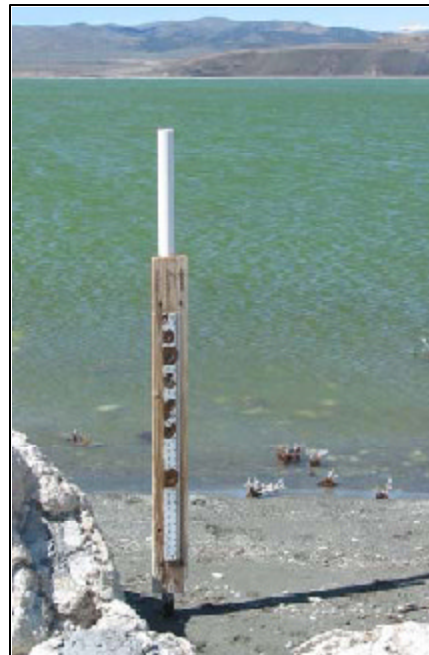
The fire that swept down from the Lundy powerhouse in late April, narrowly missing Mono City and blazing across Conway Ranch, was noticed by just about everyone; who could miss the thirty-foot flames crossing the road, the blackened terrain left behind, the four-hour shutdown of the highway, or the two-day power outage? In the midst of the firelines, though, less noticed events occurred. While volunteer firemen and Forest Service pros alike kept watch for spot fires caused by wind-borne embers, blackbirds flew past the flames and patrolled nearby ground. Much more concerned with an easy meal than the human structures nearby, they dined on the gourmet palette of insects fleeing the flames that burned through sagebrush, bitterbrush, and power poles alike. ❖



May 1998, the newly installed lake level gauge—in anticipation of the lake's rise. Lake level: 6383'



May 2003, lake level: 6382'. Yearly fluxuations in the lake level were anticipated in the Water Board Order, which is one of the reasons why the future average lake level of 6392 is projected to take 20 more years.



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# Mill Creek Settlement Discussions:

## *Many Sitting at the Table*

by Lisa Cutting

**R**eflecting on the past is appropriate given this is the 25th anniversary of the Mono Lake Committee. Looking back, there's no doubt there have been many successes along the way. In fact, it's the successes that constantly validate the Committee's role and purpose here in the Mono Basin and motivate us in our current work. But challenges still remain. And rewatering Mill Creek is one of those challenges.

For almost three years now, nine different parties have been meeting regularly, motivated by the hope of one day bridging differences to resolve water allocation issues in the north part of the Mono Basin. Participants include Southern California Edison, Bureau of Land Management, United States Forest Service (USFS), Mono County, People for Mono Basin Preservation, American Rivers/Caltrout, California Department of Fish and Game, and the Mono Lake Committee. More often than not, each party has brought along a host of participants to the meetings including decision-makers, legal council, and technical scientific experts. And while the process has been long and arduous, most parties agree that progress is being made—albeit, slowly.

At stake are many different interests and proposed uses for limited water including restoring Mill Creek, generating hydropower, irrigating meadows, grazing, fish-rearing, and maintaining water in Wilson Creek. At first glance, the assumption might be that these goals are mutually exclusive and therefore a solution is impossible. But the Committee believes that it is possible for the parties to work together and ultimately arrive at a solution that meets most of each party's needs. The Committee's 25 years of experience in negotiating cooperative solutions has been helping guide us through this process.

### **Current status**

The Federal Energy Regulatory Commission's (FERC) requisite 50-year review of Southern California Edison's Lundy power plant license began nearly two decades ago. A FERC decision was released in April 2000 (see Winter 2000 *Newsletter*) that pleased no one. The Committee's primary concern and motivation for joining the appeal process was FERC's failure to address the issue of the Mill Creek return ditch—the mechanism for returning Mill Creek water to Mill Creek after its passage through the power plant. Other parties in addition to the Mono Lake Committee—the USFS, California Trout, and American Rivers—appealed the decision because of FERC's failure to uphold the USFS 4(e) conditions (a federal rule that empowers the USFS to determine instream flows for streams they manage). This prompted the water rights holders and the parties involved with the FERC rehearing—and other interested parties—to get together and try to work things out rather than accept (or not accept) a future mandated FERC decision that would presumably still not please any party. For the Committee, the key question throughout the process has been how to balance competing water uses while returning Mill Creek to health after decades of damage caused by neglect and improper water management.

### **Why a Settlement Negotiation Process?**

Most resource managers, public officials, and organizations would agree: solutions reached through a collaborative process are generally long-lasting fixes to what were once viewed as insurmountable challenges. Just by virtue of being at the table, parties signal to one another that even though they still have their principles and guiding philosophies, they are willing to listen to

opposing perspectives and develop creative solutions that may in fact represent a win-win outcome.

In theory, the process is quite simple. The various parties share their principles, goals, and priorities with the group. Technical information is collected and shared. Questions are clarified and common ground begins to emerge. Little by little movement toward “middle ground” begins to occur. The end result is a settlement agreement in which interests are more fairly served within the context of the negotiated settlement.

FERC actually encourages settlement negotiations and settlement agreements. FERC seeks to “strengthen inter-agency coordination on hydropower licenses to shorten processing timelines,” to “encourage applicants to address stakeholder concerns before the licensing/certification process,” and to “utilize collaboration with affected parties to the greatest extent possible.” (from Strategic Plan 2001–2005, FERC, September 25, 2001, Market Objectives, Revision B)

FERC can rest assured that if an agreement arises out of this type of process all the parties are on board with its content. This means less work on FERC's part and more often than not a solution that satisfies more of the stakeholder's interests. It also means no surprises—as the parties are submitting the agreement to FERC not the other way around—and the assumption that the license is agreeable to all.

### **History of Mill Creek**

Mill Creek is the third largest tributary stream in the Mono Basin behind Rush and Lee Vining creeks. Although the Los Angeles Department of Water and Power (DWP) originally planned to divert Mill Creek water the plan proved to be cost prohibitive and never materialized.

Even though Mill Creek was not

exported to Los Angeles, it has been diverted for over 100 years for other uses. Its water has been used to irrigate north Mono Basin pastures and to generate hydroelectric power in Southern California Edison's Lundy power plant. And now with the acquisition of Conway Ranch (and associated water rights), Mono County has added fish rearing to the mix of uses. These diversions coupled with ditch systems in disrepair have prevented Mill Creek from receiving much needed water. Creekside forests, fish, and wildlife have suffered as a result. Still, given enough water, Mill's bottomlands offer huge potential for habitat restoration.

### **Why is the Mono Lake Committee Involved?**

The Mono Lake Committee advocates restoration of natural habitats and ecological processes in the Mono Basin. Restoration is continuing today on Rush, Lee Vining, Parker, and Walker creeks thanks to the 1994 State Water Board decision and the subsequent work of DWP and others.

For Mill Creek, a stream that has been mostly dewatered due to hydropower diversions and irrigation, restoration means first and foremost restoring flows to the stream either through releases from Lundy dam or by returning water through the Mill Creek return ditch. Rewatering Mill Creek would achieve a multi-channeled wooded wetland bottomland, self-sustaining fishery, and a year-round fresh-water condition at the mouth of Mill Creek that would provide important waterfowl habitat. As cottonwood-willow riparian habitats continue to decline throughout North America, especially in the arid west, restoring and protecting this habitat in the Mono Basin has become even more important.

### **The Committee's Guiding Principles**

First and foremost, the Mono Lake Committee is dedicated to protecting and restoring Mill Creek by seeking cooperative solutions that protect critical habitats while recognizing other real

water needs. What we have learned from our involvement with DWP and the State Water Board is definitely being put to the test here again in the basin.

The Committee's goal is to rewater Mill Creek's natural stream course sufficient to achieve a multi-channeled bottomland and year-round freshwater conditions in Mill Creek's delta at the lakeshore. Restoring Mill Creek's natural hydrology would result in:

- Re-establishment of wooded wetlands in the bottomlands;
- Groundwater recharge throughout Mill Creek's bottomland and delta;
- A productive fishery the full length of Mill Creek;
- A freshwater environment in both of Mill Creek's delta trenches, or "rias," as well as freshwater skim off the mouth of the creek, particularly important in winter months for migrating waterfowl.

The Mono Lake Committee is firmly committed to this negotiated settlement process. Obviously for a settlement to be reached, all parties must "give to get" in order to meet in the middle. Recognizing other party's values and goals helps prioritize decisions. The Committee believes the following to be important components of any outcome:

- Increasing efficiencies in water transport systems will create "new

water" which means that each party will have to "give up" less to reach middle ground.

- Implementing a watershed management plan that identifies clear goals and objectives for water use and incorporates an adaptive management strategy to ensure that beneficial use of the water is maximized.
- Ensuring that equity exists—both within the settlement negotiation process and the allocation of water between Wilson and Mill.

### **In Conclusion**

Water is a scarce commodity in arid Great Basin landscapes like the Mono Basin. Even though every party at the table has a proposal for Mill Creek water, the Committee firmly believes there is a solution out there that will satisfy many of the competing interests. From our past experiences, the Committee has learned that as long as there is a good faith willingness from all parties to solve the problem then collaboration, creativity, and compromise can go a long way in narrowing differences and ultimately producing an agreement that everyone can live with. ❖

## **Draft EIR Delayed from Caltrans Comment Needed in August**

Caltrans continues to refine the Draft EIR on the Mono Lake Widening Project. Once complete, the draft will be submitted to the Federal Highways Administration for approval prior to public review. Caltrans officials now estimate that the draft will be released to the public in August.

Caltrans is planning road widening along 2.9 miles of Highway 395 along the west shoreline of Mono Lake. For more details on this project see the Fall

2000 and Winter/Spring 2002 *Newsletters*.

Your comment on the adequacy of the EIR in defining significant impacts resulting from the Mono Lake Widening Project will be needed once the draft is released to the public. For more information on the Mono Lake Widening Project, or if you would like to be added to our email alert list, call Craig Roecker ([craig@monolake.org](mailto:craig@monolake.org)) at (760) 647-6595.



# A Spring Selection

from the Mono Lake Committee Bookstore



## RETRO BASEBALL JERSEY

Flash back to the late 70s with this reproduction of one of the first Mono Lake Committee T-shirt designs. Seen here on next door neighbors Shane and Natasha with Communications Director Arya, the Retro Baseball Jersey comes in white with navy sleeves like the original, but now available in 100% cotton.

*Retro Baseball Jersey, Adult Sizes: Small (#4475), Medium (#4476), Large (#4477), X-Large (#4478): \$15.00*

*Adult XX-Large (#4479): \$16.00*

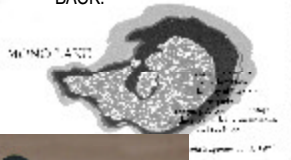
*Youth Sizes: Small (#4480), Medium (#4481), Large (#4482) : \$12.00*



FRONT:



BACK:



## MONO LAKE COMMITTEE 25<sup>TH</sup> ANNIVERSARY LOGO T-SHIRT

Staffers Erika and Greg can't help springing into spring in their Committee logo Ts! This current version of our old standby features the 25<sup>th</sup> Anniversary logo on the front chest with the Mono Lake graphic and Public Trust Decision quotation on the back. Natural colored 100% Organic Cotton in short and long sleeves.

*Short Sleeve: Small (#4100), Medium (#4101), Large (#4102),*

*X-Large (#4103), XX-Large (#4104) : \$16.00*

*Long Sleeve: Small (#4105), Medium*

*(#4106), Large (#4107), X-Large (#4108),*

*XX-Large (#4109) : \$20.00*



## 25<sup>TH</sup> ANNIVERSARY BASEBALL CAP

A special edition 100% cotton navy cap with our logo embroidered on front in silver and blue and the 25<sup>th</sup> anniversary logo on back in silver above the adjustable strap.

*25<sup>th</sup> Anniversary Cap (#4084) : \$18.00*



## 25<sup>TH</sup> ANNIVERSARY DINER-STYLE MUG

A Limited Edition retro-styled 10 oz cream colored mug with the Mono Lake Committee logos in blue. A solid feel for a good cup o' joe!

*25<sup>th</sup> Anniversary Diner-Style Mug: \$6.95 (#4450)*



## 2004 MONO LAKE CALENDAR

The 2004 Mono Lake Calendar is full of beautiful color images of Mono Lake and the Mono Basin. From tufa towers to birds and lightning strikes to rushing creeks, this 12-month calendar captures the many unique views. The 2004 Mono Lake Calendar is a great way to bring the awe-inspiring beauty of the seasons at Mono Lake to your home or office all year long. Printed in the USA on recycled paper.

*2004 Mono Lake Calendar, measures 13 1/4" by 9 1/4": \$10.95 (#4500)*

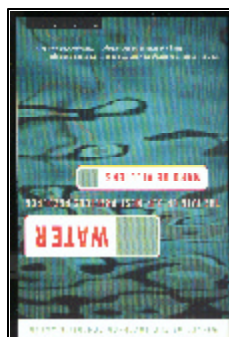
*2003 Mono Lake Calendar, still available, discount price: 13" x 9" : \$1.95 each (#3800)*

## WATER AND THE CALIFORNIA DREAM: CHOICES FOR THE NEW MILLENNIUM

BY DAVID CARLE

Previously titled "Drowning the Dream" and now in paperback, this provocative book traces how California's population growth has been shaped by imported water and how this growth has affected the environment and the quality of life. Written by David Carle who was a State Park ranger for 18 years at Mono Lake. "This book belongs in the hands of anyone interested in

California's history and future." —Sally Gaines  
*Water and the California Dream*, Sierra Club Books,  
soft cover, 235 pages, 6" x 9" : \$16.95 (#5600)



## WATER: THE FATE OF OUR MOST PRECIOUS RESOURCE

BY MARQ DEVILLIERS

This award-winning book provides an eye opening account of how we are using, misusing, and abusing our planet's most vital resource. This powerful narrative uses ecological, historical, and cultural perspectives to examine worldwide water issues from Las Vegas to the Middle East.

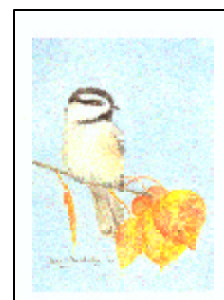
*Water: The Fate of Our most Precious Resource*, Mariner Books, soft cover,  
352 pages, 5 1/2" x 8 1/4" : \$15.00 (#0249)

## WATERCOLOR NOTECARD SETS

These wonderful sets of six notecards each are reproduced from original watercolors by local artist Nancy Overholtz. The Mono Lake Shorebird Set includes Wilson's Phalarope, Eared Grebe, Snowy Plover, American Avocet, Black-necked Stilt, and California Gull. The Wild Bird Set includes Mountain Chickadee, Western Tanager, Northern Flicker, Downy Woodpecker, Red-Tailed Hawk, and Great Horned Owl. The Scenic Set includes three different scenes of Mono Lake, as well as cards of Tenaya Lake, Half Dome, and a Sierra cascade. Printed on heavy stock paper with deckled edge and matching envelopes.

*Set of six notecards with envelopes, 5" x 7": \$15.00 each.*

*Shorebird Set (#5625), Wild Bird Set (#5577), Scenic Set(#5576)*



## THE HIGH SIERRA NOTECARD SET

A wonderful collection of eight notecards reproduced from woodcut prints by Tom Killion. Includes beautiful views of Kearsarge Pinnacles, Evolution Valley, Humphrey's Basin and more. The originals were made using a traditional Japanese technique, hand carving separate wood blocks for each color. This beautiful set comes in a folio containing details on the printmaking process.

*Set of eight notecards with envelopes, recycled paper, 5" x 7": \$12.95 (#5470)*

Order by phone: (760) 647-6595, fax: (760) 647-6377, or email: [bookstore@monolake.org](mailto:bookstore@monolake.org)

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Up to \$25	\$5.00
\$26 - \$50	\$7.00
\$51 - \$150	\$9.00
Over \$150	Free!

California law requires us to charge sales tax on sales and shipping and handling for deliveries in California.

International Shipping Rates by weight.

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Mono Lake Committee P.O. Box 29, Lee Vining, CA 93541



# Open Mind, Open Heart

by Santiago Escruceria

*Editor's note: Assistant Education Director Santiago Escruceria has spent 4 summers in the field leading the Mono Lake Committee's Outdoor Experiences Program (OE). OE brings inner-city community based organizations and school groups to the Mono Basin for 3-5 days to show them the connection between urban and natural watersheds. We asked him to write about his perspective on the experience.*

**T**he Mono Lake Committee's Outdoor Experiences Program (OE) is an opportunity for me to spend quality time with inner-city youth and high school students that may have limited experiences outside of their cities. I have a unique chance to connect on a genuine level with some unbelievable people, while sharing nature, outdoor adventures, and an opportunity to create short-term cooperative community.

All through the outstanding time we get to spend together, we create a sense of intimacy, build trust, and share adventures. We fully experience the challenging moments that may arise such as the night hike and bagging a peak, but we also share laughs and moments of personal discovery. During our time together, one of my objectives is to support and enjoy a degree of trust and communication that they may have never encountered before.

Together we cultivate this atmosphere of trust and learning. I work diligently on this feeling of intimacy from the first moment we meet and keep it alive throughout their stay, while exploring one of the most humbling and dynamic outdoor classrooms in which I have ever taught.

We combine talent and energy working as a group to get the most learning and fun out of the time we have. We eat and cook together, hike together, and on our final evening, during the closing campfire, we share with everybody in the group our trip's highlights and personal discoveries. It is a powerful experience to hear stories about



*An OE Group down at Lee Vining Creek before watering trees as one restoration activity during their stay in the Mono Basin.*

conquering fears and overcoming obstacles. It is equally powerful to hear about their moments of awe and wonder.

OE gives me a chance to spend time with urban youth while exploring a world far away from their own daily lives, a beautiful world that for some seems alien, daunting, and sometimes misunderstood. I invite them to come here to discover that this basin and lake is theirs too.

On a more personal level, the Outdoor Experiences Program offers me the opportunity to do what I like most: to teach about the natural world and the role we humans play in it. Also, the story of Mono Lake provides me with the opportunity to show kids and adults that when we bring together our energy, goals, and spirits, we can and do make a difference.

I love OE because it benefits my own personal growth as well as the growth of others. My work with youth and adults of different backgrounds and ethnicities, asks of me to keep my mind and heart open. It is a rewarding experience. ❖

## HOPE

by Carmen, Tree People 2001

Here in this higher elevation, I learned from the next generation  
Our shared experience with the water, the land,  
this community of people, birds and beasts  
Playing with children, the bones, water, rocks, and plants  
Everything gave me hope today

*Santiago Escruceria is the Committee's Assistant Education Director. He's looking forward to a bingo-free summer after his second winter-long streak of losing at the local school's bingo fundraisers.*





## Birds of the Eastern Sierra

May 24–25

David Lukas

\$95 per person/ \$80 for members

This field seminar will focus on the identification and ecology of birds in the Mono Basin. The class will visit a wide variety of habitats, including desert scrub, marshes, riparian forests, and mountain slopes, in search of breeding and migrating birds. With over 300 species having been observed in the Mono Basin, this course will be of great interest to both beginning and more advanced birdwatchers. The class will intensively explore a number of sites, mixing short leisurely walks with periods of observation and natural history discussion, taking time to learn about birds by watching them closely. Generally walks will be chosen for their accessibility, but participants should be prepared and capable of wandering off-trail in pursuit of special sightings. David Lukas has led over one hundred birdwatching and natural history programs for the Nature Conservancy, Yosemite Association, Audubon Society, Elderhostel, and other groups. He is the author of two books, *Watchable Birds of the Great Basin* and *Wild Birds of California*. He is hard at work on an upcoming field guide on birds of the Sierra Nevada.

## Introduction to Flyfishing

June 6–8

Doug Virtue

\$225 per person/ \$200 for members

Rod, reel, and tackle provided for the weekend

Limited to 6 participants

Flyfishing is a subtle and aesthetic way to deepen your appreciation of aquatic landscapes, but it's sometimes fraught with complexity and expense. If you've wanted to learn but found the tackle too costly or the standard courses too intimidating, this seminar offers a simple alternative. This seminar is limited to six participants so everyone gets personal attention. With all tackle provided, you'll learn how to cast, locate feeding fish, and select the right fly. The seminar begins Friday evening with a slide show, and continues on Saturday and Sunday with a combination of casting instruction, classroom study, and on-the-water fishing in the lakes near Tioga Pass and on Hot Creek. An optional Sunday afternoon/evening post-seminar fishing treat is offered to those who don't have to get home Sunday night. Instructor Doug Virtue has been flyfishing since 1975. He has a wealth of experience from operating a remote lodge in Alaska's Iliamna Lake to catching oceanic yellowtail in Baja California. He emphasizes a holistic, appreciative approach to fishing that's perfect for the waters of the Eastern Sierra.

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Call (760) 647-6595 to Register

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## California Gull Research: Chick Banding

July 2–5

Justin Hite/Point Reyes Bird Observatory

\$120 per person per day; overnight; meals included

Join a research team directed by the Point Reyes Bird Observatory and Cornell University to collect data on the California Gull rookery at Mono Lake. Gain hands-on experience in field survey techniques while observing how the lake's changing chemistry affects gull reproductive success. Your help is needed in continuing this important research. The rare adventure of visiting Mono Lake's spectacular Negit Islets and observing at close quarters the second largest California Gull rookery in North America is for the stout of body and heart. Please contact the Field Seminar Desk for more information on this unique Mono adventure. No previous research experience required. Fees underwrite the research program.

## Miniature Paiute Burden Basketry

July 11–13

Lucy Parker and Julia Parker

\$175 per person/ \$160 for members

Primitive group campsite included

\$60 materials fee

Crafting miniature baskets became common after Native American contact with European-Americans. Burden baskets were originally made for rough usage and could carry loads such as acorns, pine nuts, and wood. The Paiute utilized only a few materials and willow was the only foundation used. During this three-day seminar students will construct a miniature burden basket using a twining technique, one used traditionally in the most northern part of California. Students will work with split willow and California Red Bud to construct their miniature baskets. You are encouraged (but not required) to camp with the group, and evenings will be spent around the campfire with traditional songs and stories. **This seminar is designed for weavers of all levels, beginning through advanced.**

Lucy Parker is a descendent of the Yosemite Miwok, Mono Lake Kutzadika<sup>a</sup>, and Kayasha Pomo Peoples. She learned traditional handiwork from her mother, a master basket weaver, and will pass on some of her knowledge in this special three-day/two-night camping seminar. Julia Parker is Lucy's mother and has dedicated her life to learning and teaching basketry as well as continuing the traditions of her people. Julia is one of the famous basket weavers of California and is the only weaver still practicing who was taught by women that wove in the early 20th century.

## Poetry from Imagination and Basin

July 19–20

Yedda Morrison

\$95 per person/ \$80 for members

In this seminar participants will explore the breathtaking Mono Basin as writers. Through generative writing exercises, constructive feedback, group discussions, and readings, participants will explore their own creativity in the context of the history, ecology, and mythology of the Mono Basin. Whether you are new to poetry or a writer looking for inspiration, Mono Basin's rich complexity offers the opportunity to deepen one's understanding of the Eastern Sierra, the act of writing, and ultimately, oneself. This seminar will be held at various locations around Mono Lake and will include leisurely poetry walks to areas chosen for their beauty and ability to inspire. Yedda Morrison holds an MFA in Poetry from San Francisco State University. She lives in the Bay Area where she teaches poetry and publishes the internationally distributed literary journal *Tripwire*. *Crop*, a book of Yedda's poems, will be available from Kelsey Street Press in April 2003. Yedda has been exploring the Eastern Sierra for the last ten years.

## Identifying High Country Wildflowers

August 1–3

Mark Bagley

\$110 per person/ \$95 for members

At the headwaters of Lee Vining Creek is a rich summer display of wildflowers, shrubs, and trees along cascading creeks, jewel-like lakes, green meadows, and rocky granite slopes. There, amid the towering peaks of the Sierra at the source of Mono Lake's water, learn how to identify this great diversity of plants using Norman Weeden's *A Sierra Nevada Flora*. This is the most complete field guide to Sierra plants and provides identification keys and plant descriptions that minimize the use of special terminology. This weekend seminar will begin Friday evening with a 3-hour hands-on session to introduce you to the basics of plant identification. The class will spend Saturday and Sunday in the field on easily paced 1–2 mile walks at high elevations (generally above 9,000 feet), spending more time stopping and keying out plants than walking. Mark is a consulting botanist in the Eastern Sierra and Mojave Desert who has been leading field seminars in the Mono Basin since 1988. He is well known among past seminar participants for his easy-going pace and engaging teaching style in the field.

Call (760) 647-6595 to Register

## Miwok Winnowing Basketry

Aug 8–10

Lucy Parker and Julia Parker

\$175 per person/ \$160 for members (primitive group  
campsite included)

\$60 materials fee

Crafting miniature baskets became common after Native American contact with European-Americans. Winnowing baskets were used to separate leaves, skins, and hulls from foodstuff. These baskets are constructed in the same manner as seed beaters. A technique of twining will be used. The Paiute utilized only a few materials and willow was the only foundation. Each student will construct a miniature winnowing basket using a twining technique. Students will work with split willow and California Red Bud to construct their miniature baskets. You are encouraged (but not required) to camp with the group, and evenings will be spent around the campfire with traditional songs and stories. **This seminar is designed for weavers of all levels, beginning through advanced.**

Lucy Parker is a descendent of the Yosemite Miwok, Mono Lake Kutzadika<sup>a</sup>, and Kayasha Pomo Peoples. She learned traditional handiwork from her mother, a master basket weaver, and will pass on some of her knowledge in this special three-day/ two-night camping seminar. Julia Parker is Lucy's mother and has dedicated her life to learning and teaching basketry as well as continuing the traditions of her people. Julia is one of the famous basket weavers of California and is the only weaver still practicing taught by women who wove in the early 20th century.

around the 10,000-foot elevation level with a modest pace over moderate terrain. Ann is a consulting botanist and biology teacher at Santa Rosa Junior College who has taught plant classes in the Eastern Sierra for many years. Ann is a highly regarded, thorough, and dedicated instructor with many repeat seminar participants.

## Winging into Autumn

August 21–22

David Lukas

\$95 per person/ \$80 for members

This field seminar will focus on the identification and ecology of both resident and fall migratory birds. We will visit a wide variety of habitats, including marshes, riparian forests, and mountain slopes, in search of migrating birds. This course is appropriate for beginning and more advanced birdwatchers. The class will intensively explore a number of sites, mixing short leisurely walks with periods of observation and discussion, taking time to learn about birds by watching them closely. The natural history and ecology of the bird's habitat will also be discussed. Generally walks will be chosen for their accessibility, but participants should be prepared and capable of wandering off-trail in pursuit of special sightings. David Lukas has led over one hundred birdwatching and natural history programs for the Nature Conservancy, Audubon Society, Elderhostel, and other groups. He is the author of two books, *Watchable Birds of the Great Basin* and *Wild Birds of California*. He is hard at work on an upcoming field guide on birds of the Sierra Nevada.

## Introduction to High Country Plants and Habitats

August 15–17

Ann Howald

\$110 per person/ \$95 for members

This class will explore the mosaic of habitats that make up the Eastern Sierra high country—lush flower-filled meadows fed by meandering streams, sagebrush-covered slopes, forests of hemlock, lodgepole and whitebark pines, subalpine lakes bordered by willows, and flowery rock gardens. The class will focus on sight identification of common trees, shrubs and wildflowers, but won't neglect any birds, bugs or critters that come to check us out. With any luck, the group will be zoomed by hummingbirds defending their patches of paintbrush and columbine and see noisy Clark's Nutcrackers collecting and storing whitebark pine seed. This weekend seminar will begin Friday evening with an introductory slideshow session to familiarize you to the basics of plant identification. Walks will be

## Fall Bird Migration

August 23–24

Dave Shuford

\$95 per person/ \$80 for members

The east slope of the Sierra Nevada is a major migration route for birds traveling from northern nesting areas to warm southern habitats. As a result, early autumn is the time of year to see the greatest diversity of landbirds, shorebirds, and waterbirds in the Mono Basin and on Crowley Reservoir. Dave Shuford has been a staff biologist at Point Reyes Bird Observatory for twenty years. He has conducted numerous surveys and research projects in the Mono Basin and beyond, and is well acquainted with where to find birds in the Eastern Sierra. This is one of the most popular field seminars so register early for this one!



## South Shore Kayak

September 6

Stuart Wilkinson and Mono Lake Committee Staff

\$75 per person/ \$65 for members

Early fall is an ideal time to kayak Mono Lake! Join Stuart Wilkinson and a Mono Lake Committee staff member for a guided naturalist expedition along Mono's south shore. Your leaders are well versed in Mono Lake geology, ecology, history, and politics. This natural history kayak tour will cover a wide variety of topics relating to this unusual Great Basin lake. Plan on four to five hours for the tour. Expect to see underwater tufa towers, birds, and lake-bottom springs. Some kayak experience is helpful, but not necessary. Kayaks and safety equipment are provided. This seminar is offered for the 8th year in a row, and is highly rated by past participants. Space is limited in this popular seminar so register early!

## Surviving on the Edge: Sierra Bighorn Sheep in the Mono Basin

September 6-7

John Wehausen and Karl Chang

\$150 per person/ \$130 for members

Controversy surrounds the fate of the Sierra bighorn, one of the most endangered mammals in North America. (The US Fish and Wildlife Service listed the Sierra Bighorn Sheep as Federally Endangered in 1999.) This field seminar will involve discussions of the biology and conservation of these animals with attempts to view them. John Wehausen is a research scientist at White Mountain Research Station in Bishop. He has been investigating various aspects of the Sierra bighorn and working for their conservation since 1974. In the late 1970s he initiated the restoration program that brought bighorn back to the Mono Basin. There is a very good chance of seeing Sierra bighorn sheep in the wild during this seminar, but no guarantee. In the words of one past participant, "this is a high sierra salon experience if there ever was one." A portion of the proceeds from this seminar will benefit the Sierra Nevada Bighorn Sheep Foundation. **This seminar involves strenuous hiking at the 10,000-foot elevation and above.**

## Drawing Mono

September 13-14

Moira Donohoe

\$105 per person/ \$90 for members

If you enjoy drawing within a magnificent setting, then this seminar offers the opportunity to deepen and preserve your Mono Lake experience while expanding your artistic talent. During this two-day seminar the class will spend most of each day in the field drawing. Moira will cover basic drawing techniques while encouraging individual style. There be will be instructor demonstrations, material discussion, and non-threatening and constructive group/individual critiques. Using the simple materials of charcoal, ink, brush, pencil, and pastel on paper, record your impressions of strange and mysterious Mono. Moira is a professional artist, art instructor, and long-time resident-artist of the Yosemite area. She holds a degree in Fine Art from Northern Arizona University and a Masters Degree in Painting & Drawing from CSU Fresno. She has shown her work professionally since 1983. This seminar is appropriate for the beginner, intermediate, or advanced artists who want to further their skill with an experienced area artist.

## The Story Behind the Land: Geology of the Mono Basin

September 27-28

Tim Tierney

\$95 per person/ \$80 for members

The Mono Basin is a geological showcase, featuring young volcanoes, glaciated landscapes, stark mountains, and weird mineral towers, all set about ancient and saline Mono Lake. Explore this land with geologist Tim Tierney (UC Santa Barbara instructor and author of the Committee's field guide *Geology of the Mono Basin*) and learn how to recognize the geology, know the reasons behind why things have happened, and what the future may hold. The first day of the seminar will be spent gaining an overview of the area via car and short walks. The second day will focus on thoroughly exploring a few select areas with extended hikes. Cool fall weather and brilliant colors will highlight the geologic wonders of this popular field seminar. Tim is an excellent teacher and interpreter of the "hard" languages, and has been a popular seminar leader among geology sleuths and laymen alike.

## Reading the Aspen Groves: Arborglyphs and Aspen Natural History

October 4–5

Richard Potashin

\$95 per person/ \$80 for members

Known for their breathtaking fall color displays and distinctive quaking, aspens border the high meadows of the Glass Mountains and the Mono Basin. A century of sheep grazing brought many Basque sheepherders into these meadows. With their leisure time they left numerous carvings—or arborglyphs—on the aspens. Come along on an enchanting journey into the aspen groves to explore this historic, organic art form and the natural history of the trees themselves. The class will learn about the numerous wildlife, insects, and birds that are drawn to the groves. During leisurely walks the class will discuss the history of the sheep grazing in the Mono Basin, the Basque culture, the cultural significance of the carvings and efforts to document them. Richard Potashin, a.k.a. Alkali Aspenowza, is a long-time Eastern Sierra resident and past Mono Lake Committee intern and canoe guide who has been discovering and documenting aspen carvings for the past five years. He's involved with numerous interpretive activities throughout the Eastern Sierra.

## Mono Basin Fall Photography

October 10–12

Richard Knepp

\$195 per person/ \$175 for members

Autumn in the Mono Basin is one of the greatest photographic experiences in the country. Spectacular foliage and skies combine with exceptional light, presenting ample subject matter for photographers in both color and black and white. Join accomplished photographer Richard Knepp to explore varied shoreline locations at sunrise and sunset, and fall color in nearby canyons. Beyond his photographic expertise, Rick is intimately familiar with the Eastern Sierra and Mono Lake locale. Subjects for discussion include composition, exposure techniques, filtration, basic theory of the Zone System, and developing a personal vision. Photographers of all levels are welcome; a fully adjustable camera of any size or format is suggested. This photographic seminar is offered for the 9th year in a row, and is highly rated by past participants.

## Field Seminar Registration Information

### • Registration •

Call the Mono Lake Committee at (760) 647-6595 and ask for the seminar desk to register. More extensive seminar descriptions are available upon request or online at [www.monolake.org](http://www.monolake.org).

We accept VISA, MasterCard, and Discover or personal checks payable to the Mono Lake Committee. Sorry, we cannot accept registration by mail or email.

Seminars are limited to fifteen people except where noted. If a seminar receives less than six participants, the seminar will be cancelled two weeks in advance, and full refunds will be given. If you cancel three weeks prior to the seminar start date, we will refund your payment (less a \$10 processing fee). No refunds after that date, but tuition can be applied to another class in 2003.

Participants must sign a liability release form. All seminars operate under permit from the Inyo National Forest.

The Committee works with instructors and field leaders that have received high ratings from past seminar participants. We emphasize a spirit of learning and camaraderie in magnificent outdoor setting for a reasonable cost.

The Mono Lake Committee Field Seminars benefit research and education in the Mono Basin.

### • Discounts •

Mono Lake Committee Field Seminars are open to everyone, but Mono Lake Committee members get advance notice and class discounts. If you are not a current member of the Mono Lake Committee, you may receive the discount by joining when you register.

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Call (760) 647-6595 to Register

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# Staff Migrations

by Geoffrey McQuilkin

It has been pretty quiet around here in terms of staff migrations ... the quiet, no doubt, before the storm of seasonal staff arrivals.

We are excited to announce one springtime transition: Patricia Holland is

Mono Basin Historical Society  
presents

## Sagebrush Ghosts of the North Mono Basin

Thursday, June 19, 2003

Join a historical field trip in the northwest corner of the Mono Basin to visit with the ghosts of Mono past.

**When:** meet at the Old Schoolhouse Museum in Lee Vining at 9:00am. Tour ends mid-afternoon at the Mono Inn for refreshments

**Where:** Visit Filosena's Ranch, the old Jordan powerplant site, Conway Ranch, DeChambeau Ranch and more.

**More info and reservations:** call (760) 647-6461 or email mbhs@qnet.com.

**Cost:** \$10 suggested donation or membership in the Historical Society.

Don't worry too much if you miss this one, more historical field trips are coming this summer and fall!

joining us as the Committee's new Office Manager. Patricia knows the Eastern Sierra (she's lived here for many years), Mono Lake (she's even helped with letter writing campaigns in the 1980s), and is ready to keep the office in order (she's a teacher, most recently with 150 8th grade students). With school not even out, she's already at work a few afternoons a week and we're excited to have her enthusiasm, organization, and ideas as part of the team.

Development Director Shelly Backlar is expanding her horizons by starting her own consulting business. Luckily, we've made the client list! A veteran of Bike-A-Thons and bus tours alike, Shelly has shared her skills with the Committee for many years, organizing events, writing grants, and working with Committee members and volunteers. Her contributions to Mono Lake's protection have been huge, and we're happy that she's not going far. We'll be seeing lots of her, and Mono Lake, I'm sure, won't be far from her thoughts.

Congratulations to Board Member Martha Davis on her election to the Board of the WateReuse Foundation and the California Chapter of the

WaterReuse Association. She joins fellow Mono Lake Committee Board Member Rich Atwater who is on the Board of the WateReuse Association and is the Chair of their legislative committee. The mission of WateReuse is to increase the amount of water reclamation and recycling in the world. Go Martha!

And many thanks to local Lee Vining High School student Regan Heater for interning at the Committee this winter. His help has been great and we're excited to have him stay on this summer too!

In the office we hear that some loyal readers are keeping tabs on the Committee staff babies, so here's the update.... ❖



Caelen McQuilkin and Sabine Pyle at the crafts table.

## 2003 High Sierra Fall Century: Saturday, September 13

This year the Sierra Cycling Foundation will be the lead organizer and full beneficiary of the High Sierra Fall Century. The Mono Lake Committee, which for six years has partnered with the Foundation to produce this grand event, is stepping back to be an active volunteer. The Mono Lake Committee will sponsor the Mono Lake and Wild Rose stops on the 100-mile course (Wild Rose is also on the short course!), and will remain active members of the organizing committee.

For past Century riders, you know this is a premiere event. For newcomers, you have a treat in store. The date is Saturday, September 13; registration will be open online at [www.active.com](http://www.active.com) by May 1; the base cost this year is \$40 for the full century. There are two courses, 100 miles, and a 35-mile short course. The ride is very well sagged—in the past a rider could gain weight! For more details about the course and registration, visit [www.fallcentury.org](http://www.fallcentury.org) or call (775) 265-6936.

The Mono Lake Committee is proud

of its role in helping build the High Sierra Fall Century to over 900 riders in 2002, but with the growing success of the Mono Basin Bird Chautauqua (June 20-22, 2003), it is impossible to be a leader on both events. Look for Committee staff and volunteers this year at the Mono Lake and Wild Rose stops—and at the Mono Lake Committee booth at the finish. Of course, we want to see you at the Mono Lake Committee Information Center and Bookstore in Lee Vining, too.





# From the Mailbag

*News from Members and Friends*

by Erika Obedzinski

"A Light exists in spring  
Not present in the year  
At any other period..."

~Emily Dickinson

All winter when I found myself down by the lake, I would spend a few minutes looking into the water for brine shrimp. I know that adult brine shrimp die off in cold winter temperatures, leaving behind their dormant eggs at the bottom of the lake, which will hatch when temperatures rise again. But still I would look, wondering if there just might be a few adults that survived through the cold months. All winter, I never spotted one. So a few weeks ago, when I was sitting on the dock by the lake, and finally did see a handful of shrimp swimming through the green water, I knew it must be a sure sign of spring!

The warmer season arrives in Lee Vining in subtle ways—this silent hatching of brine shrimp under the blue-green water, the sound of melting snow, the sight of California Gulls flying overhead, and Spotted Towhees calling across the trail to each other from their sagebrush perches. I like learning these signs of spring, which are different from those I knew in San Geronimo (where I lived before moving to Lee Vining). They all mean the same thing—the passing of winter, and the arrival of spring!



## Music and Ecology Camp at Mono Lake

Explore Mono Lake through this independent camp for instrumentalists ages 11–18. Camp will take place during the week of June 22–28. Mornings will focus on activities to learn the ecology and natural history of the Mono Basin and Sierra Nevada. Afternoons will focus on music practice and lessons. The week will conclude with a concert held at the historic Mono Inn. For more information, contact camp organizers Cole and Priscilla Hawkins at (530) 753-1927.

### *In Memory*

**Mr. & Mrs. John M. Aitken** of San Francisco gave a donation in memory of **Susan Aitken-Simon**, **Carol Mathews** of Walnut Creek gave a gift in memory of **Robert Mathews**, **Peter Messner** of Belmont made a donation in memory of **Dorothy Messner**, **Rita & Eugene Russell** of North Highlands gave a gift in memory of **Michael Daniel Ember**, **Nicki A. Spillane** of Kensington made a contribution in honor of **Paul Green**, **Mary Lou Swarner** of Escondido made a donation in memory of **Catherine Steele**, **Mary E. Vestal** of Boise, Idaho gave a gift in memory of **Elden Vestal**, **John & Laura Weeks** of Richmond made a contribution in memory of **Martha Hill Niccolls**, and **Elaine Anderson White** of Bakersfield gave a gift in honor of **David Gaines**.

We have received many generous donations in memory of **Alberic "Rick" de Laet** in addition to those mentioned in the Winter 2003 *Newsletter*. Gifts were received from **Mr. & Mrs. Leo Cheslak** of Redford Township, Michigan, **Ellen S. Cole** of Winnetka, Illinois, sisters **Patricia Elward** and **Susan Risoli** of Santa Cruz, **Margery & Jeff Haywood** of London, Ontario, Canada, **Kirsten & Jok Legallet** of Burlingame, **Randie Lintz & Susan Peterson** of San Francisco, **Philip Merrill** of Belvedere, **Lea & Bud Shea** of Bloomfield Hills, Michigan, and **Margery Spielman** of Ventura.

We bid farewell to local friend **June Engel** of Mammoth Lakes. In addition to supporting the Committee, June was an avid supporter of many local causes including the Friends of the Mammoth Lakes Library, the Wilderness Society, and the Sierra Club.

### *In Honor*

**Mr. & Mrs. Gary Kawamura** of San Jose made a gift in honor of **Sue Imada** of San Jose, who has been a long time friend and supporter of Mono Lake.

### *Special Thanks*

Many thanks to **Snowdy Dodson** of the USGS for donating a copy of the 1886–87 U.S. Geological Survey Annual Report for the Committee's research library.

### *Secure Mono Lake's Future*

Remember the Mono Lake Committee in your will or living trust, or name the Committee as a beneficiary of your IRA, qualified retirement plan or life insurance policy. Your thoughtful gift will help us protect and restore Mono Lake, educate youth and young adults about water and the environment, and move the state toward a strong ethic of conservation and water use efficiency. For more information contact Frances Spivy-Weber ([frances@monolake.org](mailto:frances@monolake.org)) at (310) 316-0042.

*Erika Obedzinski is the Committee's Membership Coordinator. She gracefully made it through her first snowy winter ever in the Mono Basin.*