



# THE MONO LAKE COMMITTEE

OF THE SANTA MONICA BAY AUDUBON SOCIETY

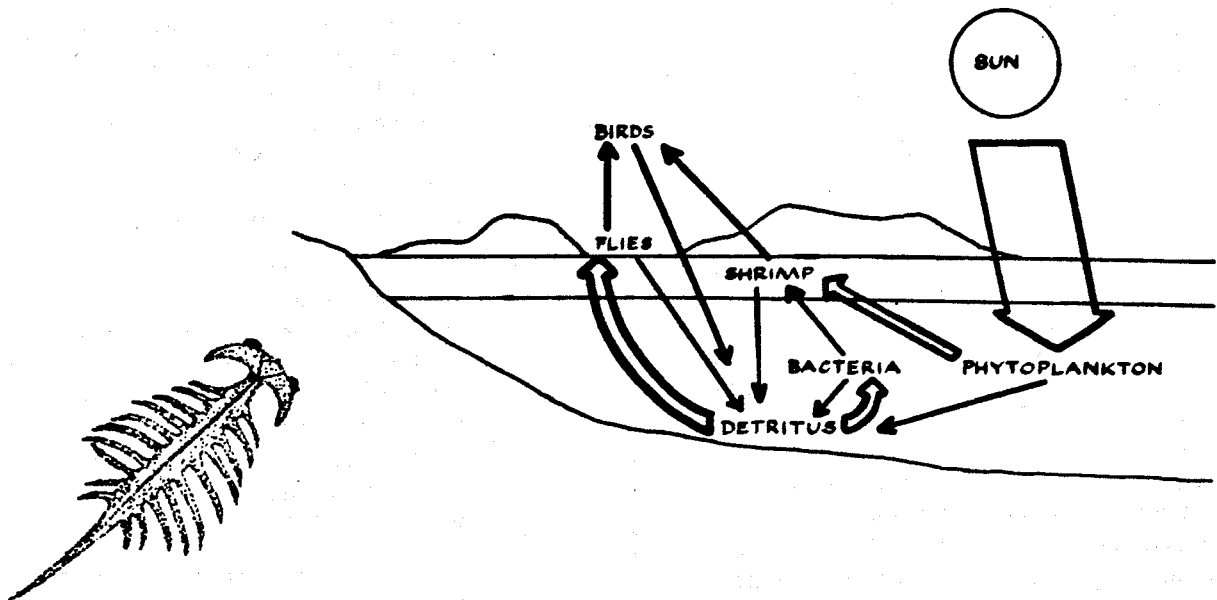
POST OFFICE BOX 2764, OAKLAND, CA 94602

Newsletter

Edited by: David Gaines

Vol. 1 No. 2

Summer, 1978



## THE MONO LAKE BRINE SHRIMP, *Artemia monoensis*?

The lake which Mark Twain called the "dead sea of California" is, in reality, teeming with life. Small, delicate crustaceans, called brine shrimp, thrive in its waters, and few places host greater numbers of birds.

Mono, in fact, is one of the planet's most life-productive bodies of water. Its phytoplankton- microscopic, photosynthesizing algae- capture and store prodigious quantities of solar energy. The phytoplankton are "grazed" by seemingly infinite herds of brine shrimp and flies. These, in turn, nourish immense flocks of birds.

The next time you pass by Mono, check the lake's living

pulse. Is its surface peppered with millions of birds? Can you hear the cries of gulls and shore-birds? What will you see and hear in years to come?

The "dead sea" is dying, its lifeblood shuttled to the south. To save the lake more water must be released down Rush and Lee Vining Creeks. Otherwise, within our lifetimes, Mono will become a silent, birdless chemical sump.

This issue features an article on the brine shrimp, those feathery and, as we shall see, mysterious crustaceans on which millions of birds depend for sustenance. Is the Mono Shrimp endangered? See page 4.

The MONO LAKE COMMITTEE is a nonprofit citizen's group dedicated to the preservation of the scenic and wildlife values of Mono Lake, California.

Sponsored by the Santa Monica Bay Audubon Society.

Chairperson: David Gaines  
Vice-chairperson: David Winkler  
Secretary/Treasurer: Sally Judy  
Correspondent Secretary: Mark Ross

Los Angeles Phone: 213/838-4909

Sacramento Phone: 916/481-6174  
(7-9 pm only)

\* \* \* \* \*

The newsletter features updates on the latest developments affecting Mono's future as well as articles on the natural, geological and human history of Mono and other Great Basin lakes, reviews of current research and recent publications, plant and animal checklists, and announcements of field trips and talks. We invite your comments and contributions!

The newsletter is published at cost four times a year by California Syllabus, 1494 MacArthur, Oakland, CA 94602.

**IMPORTANT:** If your copy is improperly addressed, if you fail to receive an issue, or if you are moving, please let us know! Address all correspondence to: PO Box 2764, Oakland, CA 94602.

This summer, for the first time in almost a decade, snowmelt found its way past the Rush and Lee Vining Creek diversions into Mono Lake. But the sight of water flowing down these creeks, however heartening, was little cause for comfort. Despite the wettest winter in years, Mono continued to shrink. During the four months since April, a period of high runoff, we watched the lake recede. On the shallow east side up to 30 yards of shoreline was exposed. The lake has not been lower for thousands of years.

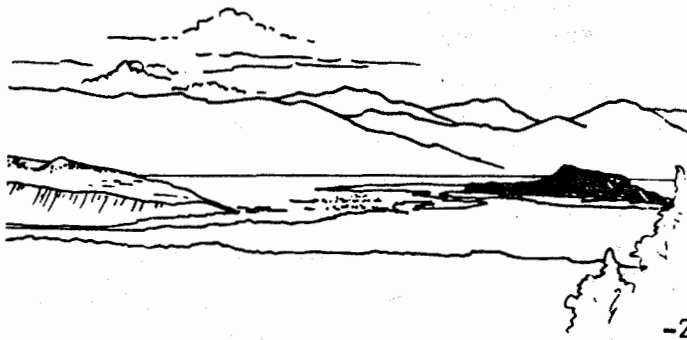
Why has Mono continued to ebb in a year when California almost washed into the sea? During the past winter snow piled high in Mono Lake's watershed, as it did throughout the Sierra Nevada. But instead of feeding the lake, most of the above average snowmelt was shunted south into the Los Angeles aqueduct.

Why was all this water needed in a year when runoff throughout the aqueduct's eastern Sierran watershed was about 150 percent of normal? Why was no more released into Mono Lake?

In the weeks ahead, we hope to ferret out answers to these questions. In our fall issue, after the "evaporation year" has ended, we will bring you up to date on how Mono Lake has fared, and feature an article on where its water goes and how it is used.

**GULLS NEST SUCCESSFULLY  
ON NEGIT ISLAND**

David Winkler, Chris Swarth and Steven Gelman spent July 10th visiting Mono's California Gull colonies. They mapped the distribution of the colonies and conducted censuses in representative areas. Their data indicates that no decline has taken place in the two years since censuses were last conducted. The breeding cycle was advanced-



approximately ninety percent of the 30 to 40 thousand gull chicks were within one to two weeks of fledging.

The channel blasted between Negit Island and the mainland by the California Department of Fish and Game, the Bureau of Land Management and the California National Guard thus succeeded in protecting the Negit Island gull colony this year. Only one set of canid (coyote?) tracks and one scat with gull feathers were discovered on the island. We of the Mono Lake Committee thank the agencies for their concern and cooperation.

Will the gulls fare as well next year? We will be working with the agencies and National Audubon to bring back the Guard this fall to deepen the channel and complete the fine job they initiated in the spring.



On March 17-18, 1978, the California National Guard blasted a channel through the Negit Island landbridge. It was this blast which ensured a successful nesting this season.

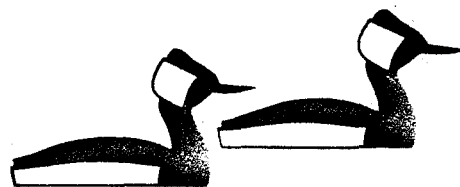
#### WHO WE ARE AND WHAT WE ARE DOING

The Mono Lake Committee was officially formed in March, 1978 by David Winkler, David Gaines, Sally Judy and Mark Ross. But its birth really dates back to summer, 1976 when Winkler and Gaines helped a group of researchers from Stanford University and the University of California at Davis pursue a broad-spectrum study of the lake's ecology. We fell under the spell of Mono's vast vistas, lunar landscapes, rainbow sunsets and great flocks of birds. By the end of 1977, however, the toll of unrestricted water diversions was terribly evident. Bathtub rings of ugly white alkali marked the forty plus feet the lake had dropped since diversions began in 1940. A landbridge connected Negit Island to the mainland, jeopardizing the sanctuary of 90 percent of California's nesting California Gulls. Unless we rallied in defense, Mono's scenery and wildlife would soon be irretrievably destroyed.

We had to begin at once. Fortunately we found sympathetic ears among members of the Santa Monica Audubon Society, a group well-known for their efforts on behalf of California's deserts. They have taken our nestling group under their wing, so to speak, for its first year. This has enabled us to solicit donations as a nonprofit, tax-deductible organization.

To date most of our activities have focused on publicizing Mono Lake and its plight. This summer we have been leading field trips to the lake and presenting slide-illustrated talks in Mono County and Yosemite National Park. As the lake wins new friends we have been building a grass-roots network to spread the word state and nation-wide.

(continued page 10)



## MONO'S MYSTERIOUS BRINE SHRIMP An Endangered Species?

by David Gaines

During the summer months Mono's waters are the haunts of a small animal that Mark Twain characterized as "a white feathery sort of worm, one half an inch long, which looks like a bit of thread frayed out at the sides." This coarse description, the first published reference to Mono's brine shrimp, does scant justice to these delicate crustaceans. The shrimp, in fact, are hardly frayed or wormlike in appearance. Their translucent bodies are colorful, ranging in hue from red and ochre to green and turquoise. At the anterior end of the trunk two black eyes dot the sides of their crescent-shaped heads. The shrimp's elongate, tapering trunks are fringed with eleven pairs of plumose appendages, called phyllopodia, which continually skull the water. This graceful, symmetrical motion propels the shrimp while they gather food. As they swim water is forced towards their trunks through a fringe of filter hairs (setae) situated on the phyllopodia. Algae and bacteria are filtered out of the water, passed to the food groove on the ventral midline of the trunk and then swept forward to the mouth.

From June through September the water of Mono Lake suggests an organic alphabet soup filled with innumerable feathery hieroglyphs. The numbers of shrimp are astronomical. David Mason, who wrote his Ph.D. thesis on the lake, estimated that maximum populations exceed 1000 individuals per square foot-- and this may be conservative. The 250 tons harvested in three months each year by a commercial fish food company-- about 22 billion individuals-- is an infinitesimally small fraction of the total population.

Mono's importance to birds derives in large measure from this cornucopia of brine shrimp. Since there are no fish, the shrimp's only predators are the lake's immense nesting and transient water bird populations. With so many shrimp, there is plenty of food for all.

During the fall and winter, the lake undergoes a metamorphosis. Of the quadrillions of shrimp that thrived beneath the summer sun, scarcely an adult remains. In their absence the algae bloom and multiply until their sheer numbers opaque the surface water. While icy winter winds whip across the lake, these microscopic plants continue to grow and multiply, storing solar energy in complex organic molecules. The shrimp, meanwhile, survive as cysts on the bottom of the lake. In April and May they hatch, swarm to the surface and seemingly graze away most of the past winter's algal bloom.

As yet nobody understands why Mono's shrimp crash in the fall, why their eggs sink or, in sum, very much at all about their ecology. Working to dispel this ignorance is Petra Lenz, a graduate student under the tutelage of Dr. John Melack, limnologist at the University of California, Santa Barbara. For almost a year Lenz has been sampling off Mono's south shore, recording data on brine shrimp density, water temperature, turbidity, dissolved oxygen and other parameters. During the winter she treks to the lake on cross-country skis!

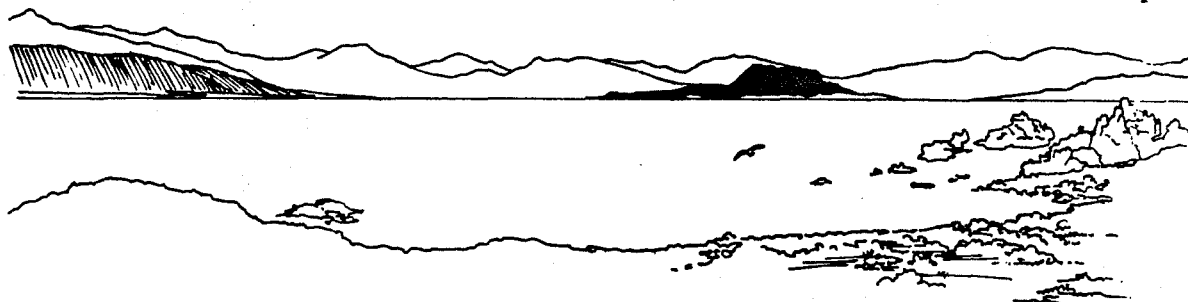
Her regimented and rather tedious sampling will generate our first clear picture of the Mono shrimp's demography, that is, its distribution in the lake's waters, its growth rate and its vital statistics. With this baseline data limnologists can begin to explore the relationships between shrimp,

phytoplankton, nutrients, water chemistry, lake currents, springs and other aspects of the Mono Lake ecosystem.

There is no lack of brine shrimp mysteries to baffle and intrigue Lenz and other researchers for generations to come. This summer I visited Petra at the University of California's Sierra Nevada Aquatic Research Laboratory near Mammoth Lakes, her base of operations. She outlined some of the puzzles:

(1) Why are the shrimp so unevenly distributed? In many of the shallower parts of the lake there are dense plumes of hundreds of thousands if not millions surrounded by seemingly identical areas with very low densities. Do these plumes relate to food? Salinity? Temperature? Mating?

(2) Are the shrimp able to propel themselves from less to more favorable parts of the lake? Or are they fated to drift wherever the currents take them?



(3) Why are the shrimp so variable in color? The red pigments, which are thought to indicate an increase in hemoglobin or other oxygen-carrying compounds, might indicate depleted oxygen levels in the lake water. But why do different colored shrimp dwell side by side?

(4) What environmental or internal cues control the reproductive cycle? The Mono shrimp overwinter as cysts, hatch out as miniatures called nauplii and reach the adult stage after 14 successive molts. Unlike many

populations they are sexual, the females possessing two egg sacs and the males two prehensile copulatory appendages that hang like long pendant moustaches from their anterior end. After every molt (each four to six days) the females apparently mate and release nauplii or fertilized eggs into the lake. This cycle continues throughout the summer. Then, in the fall, they spawn the overwintering cysts. Then all the adults die and disappear.

What stimulates the shrimp to stop producing nauplii and fertilized eggs and start producing cysts? What awakens the cysts after eight months of sleep on Mono's bottom?

Equally intriguing is the relationship of Mono's brine shrimp to populations dwelling in other salty or alkaline waters around the world. Although all these populations are lumped into a single species, Artemia salina, there is overwhelming evidence for the Mono shrimp's

genetic uniqueness. One striking difference is the density of their eggs. In contrast to brine shrimp elsewhere, those at Mono produce eggs that sink rather than float. Furthermore the Mono shrimp die in anything but Mono Lake water. Conversely shrimp from San Francisco Bay, Great Salt Lake and other localities cannot survive in Mono brine (Bowen 1964). This indicates that the Mono shrimp are reproductively isolated by habitat and, by definition, deserve to be recognized as a distinct biological species. Scientists are cautious, however, and brine shrimp taxonomy

is being revised very slowly. Clark and Bowen, in a 1976 paper, refrain from assigning "species names to the Mono and Urmia populations until we have characterized them more completely in regard to biochemical traits." But no one questions that the Mono shrimp, like the lake itself, is unique and irreplaceable.

The future of the shrimp, like that of all the lifeforms dependent on the lake, will be bleak unless diversions are curtailed. Within the next 20 years increasing concentrations of dissolved ions will probably overtake the shrimp's ability to keep its internal salts below toxic levels. In the only experiments conducted to date, Herbst and Dana (1976) exposed Mono shrimp to increasing concentrations of lake brine. Mortality rose dramatically at about twice present concentrations and approached 100 percent soon thereafter.

Brine shrimp in general are astonishingly capable of coping with salts. At Great Salt Lake and at salt ponds along San Francisco Bay, they survive in saturated solutions of sodium chloride (ordinary table salt). At Mono, however, the shrimp must overcome high concentrations, not only of chlorides, but of carbonates and sulphates as well (see figure). As salt-regulating mechanisms are ion-specific, it is exceedingly unlikely that brine shrimp (or any other animal) will be able to continue to cope with all these substances if the lake shrinks much further.

The Mono shrimp is an endangered population if not an endangered species. For thousands if not hundreds of thousands of years, it has dwelt in this inland sea at the eastern base of the Sierra Nevada, evolving the miraculous physiological adaptations needed to thrive in a lake unlike any on earth. Enid Larson, biologist-laureate of eastern California,

has remarked that if water is to serve "the greatest good for the greatest number," we must spare enough for the Mono shrimp, for they outnumber us many times over. In 1933 consideration of the "greatest good" persuaded members of Congress to cede Mono Basin water rights to the City of Los Angeles. But did they ever consider the little shrimp and the unique living lake of which it is part?

#### Selected References

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Herbst, D. B. and G. Dana. 1976. In: Winkler, D. ed., Univ. Calif. Davis Inst. Ecol. Publ. 12: 63-69.  
Mason, D. T. 1967. Univ. Calif. Publ. Zool. 83: 1-110.



#### POEM

written by a schoolchild at Bodie  
sometime before 1943

Down the mountain came the white coal  
Into Mono Lake it flowed with glee  
Until it made a tiny sea  
Then with their money all begiled  
Came Los Angeles so wild  
To buy the farmers of their land  
And to pay them with a stingy hand  
The farmers made them pay a good fee  
And took Los Angeles' money in glee  
But in a few hundred years to be  
There won't be any more sea  
There will be a desert dry  
Like the drinkers were when the  
18 amendment went into style  
Fie to Los Angeles, fie.

## ONGOING RESEARCH

This summer biologists from the University of California, Oregon State University and the Point Reyes Bird Observatory probed the mysteries of the Mono Lake ecosystem.

Dr. John Melack, limnologist from the University of California at Santa Barbara, initiated an ongoing study of the seasonal and spatial patterns of Mono's phytoplankton and began developing methods for studying the lake's nutrient chemistry. He has promised an article for a future newsletter. Petra Lenz, a graduate student working with Melack, is pursuing a demographic study of the brine shrimp (see brine shrimp article).

David Herbst, graduate student with Dr. Frank Conte, Oregon State University, is comparing the salt regulatory capabilities of Mono Lake brine fly larvae (*Ephydra hians*) with those from Abert Lake in Oregon.

Bird research focused on the habitat requirements and breeding success of the Snowy Plover. David Winkler and Gary Page of the Point Reyes Bird Observatory conducted the study with the assistance of Steve Gellman, Susan Peaslee, Lynne Stenzel, Barbara and Chris Swarth, Ralph Widrig and other dedicated volunteers. A full report on the "plover patrol" and their findings will appear in our fall or winter issue.

Winkler's effort to study the migration of the Wilson's Phalaropes was thwarted by a shortage of available time and personnel and the bird's uncanny ability to avoid being trapped. But he did succeed in recapturing a Northern Phalarope that he had banded on almost the same date one year before within 50 yards of the exact spot!

From the beginning of April on, the "plover patrol," with the help of visiting ornithologists, kept track of Mono's water bird populations. The importance of the lake to northward migrating shorebirds was documented for the first time. The California Gull rookeries were surveyed on July 10th (see article). An "all-lake census" on July 30th tallied normal numbers of gulls and shorebirds, but Eared Grebes were unexpectedly low. Five additional species were added to the known avifauna: Cattle Egret, Black Brant, Mountain Plover, Whimbrel and Dunlin.



John Harris, graduate student with Dr. E. W. Jameson, University of California at Davis, is studying the small mammals which dwell around the perimeter of Mono Lake. He is especially interested in the Dark Kangaroo Mouse (*Microdipodops megacephalus*), a diminutive relative of the kangaroo rats known in California only from Benton and the vicinity of Mono Lake. Harris hopes to learn how these hardy little animals subsist among the salt grass and greasewood.

Thanks to Erica Buhrmann, Cameron Barrows and Christine Weigen for art work and graphics!

## SHOREBIRDS ARRIVE AT MONO LAKE

by Chris Swarth

from the Plover Patrol Journal,  
10 July, 1978

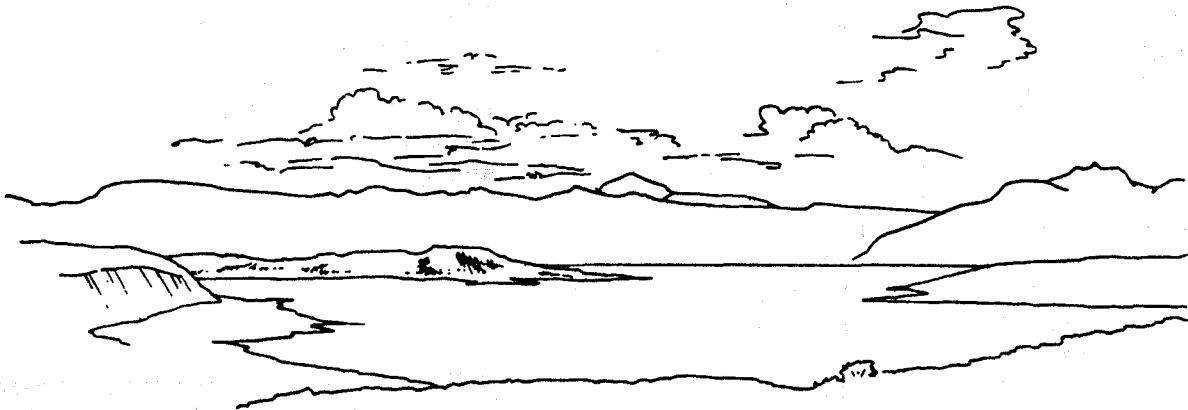
With the gull colony census completed we paddled our canoe to "Krakatoa," a small islet east of Negit Island. It was late afternoon and the lake was very calm, a condition unusual for that time of day. We beached the canoe and clambered up the black volcanic rocks. From the top of this craggy lookout we could see the distant eastern shore. And far in the distance a long thin line of white appeared just above the placid blue water. Closer inspection through binoculars revealed a single file flock of small white shorebirds. The Wilson's Phalaropes had returned to Mono Lake!

For the next hour we sat, our eyes scanning the eastern horizon as thousands of phalaropes dropped out of the sky. When small flocks of a few hundred birds neared the water they coalesced with other flocks into mile long lines of up to 5000 individuals. They then flew south, their white underparts flashing and reflecting the setting sun. In one hour we estimated that close to 24,000 phalaropes crossed the lake towards favored feeding areas on the south side.

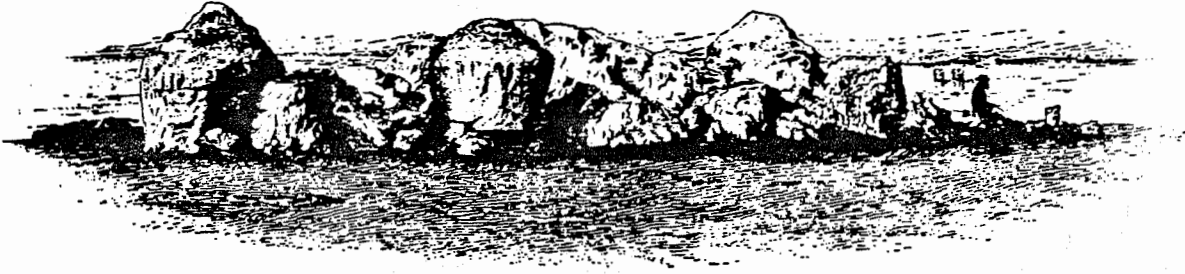
## RECENT PUBLICATIONS

Geological Guidebook to the Long Valley - Mono Craters Region of Eastern California, by Steven R. Lipshie, Geological Society of U.C.L.A. Field Guide No. 5, 184 pp. This guidebook is a "must" for anyone seriously interested in the geology of the Mono Basin and the region to its south. It is structured around a detailed series of guided geologic tours along roads in the region. The lucid, though necessarily somewhat technical text will reward the diligent layman with a comprehensive, in-depth appreciation for one of the most geologically diverse and spectacular regions on earth. Illuminating photographs, including an outstanding aerial of the Mono Craters and the south end of Mono Lake, complement the text. We only regret that this guidebook treats only the southern portion of the Mono Basin.

Copies are available for \$9.00 postpaid from: Steven R. Lipshie, Dept. of Earth and Space Sciences, University of California, Los Angeles, CA 90024.







MONO'S TUFA FORMATIONS  
by David Winkler

Mono Lake has long been famous for the peculiar mineral formations, called "tufa," scattered along its shores. Words cannot adequately convey the effect these structures can have on the visitor who suddenly finds himself in a verdant marsh surrounded by cream-colored limestone mushrooms and cauliflowers... Or, looking out across the lake, is greeted by a wonderland forest of slim, tall towers reaching out of their reflections into the immaculate blue sky... Or, along a trackless shore, encounters intricate temples of cemented sand no more than waist high. When viewed from boat level one can imagine whole successions of styles and traditions in Lilliputian architecture, all displayed against the sublime backdrop of the Sierran escarpment and the two-dimensional expanse of Mono's indigo waters.

This abundance and diversity of tufa sculpture, unrivalled anywhere else on earth, has nourished the imagination of laymen and scientists alike. Joseph LeConte, one of California's preeminent early naturalists, described Mono's tufa in 1879, but a thorough account of their structure did not appear until ten years later. Israel Russell, in his comprehensive survey of "The Quaternary History of the Mono Valley, California," not only described the tufa in detail, but speculated for the first time on their origins. He postulated that they owed their birth to

the complex physical interaction of calcium ions in freshwater springs with carbonate ions in the water of the lake.

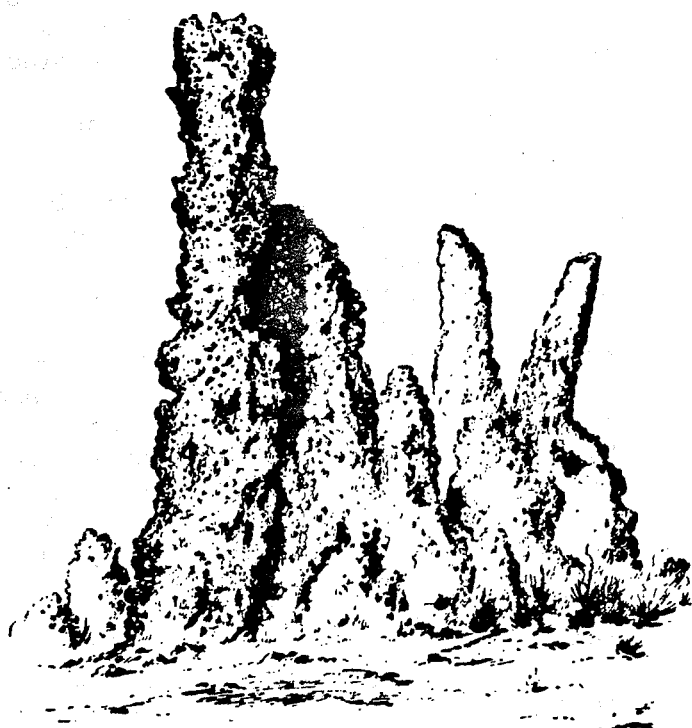
But this hypothesis seemed sufficient to Russell for only a short time. A pioneering study on the role of algae in the formation of travertine deposits appeared in the same year as Russell's "Quaternary History." Swayed by the new evidence, Russell changed his mind and, in 1893, asserted that algae were essential to the formation of Mono's tufa.

More than half a century later, in 1953, this theory was questioned by James Dunn, who reasserted Russell's original view that Mono's tufa are entirely the result of inorganic processes occurring at the interface between incoming fresh spring water and the lake's brine. The most recent volley in this teeter-totter dialectic came in 1964. Based on microscopic analysis of the structure of the tufa David Scholl and William Taft argued that algae were indeed intimately involved in its formation. They conceded, however, that inorganic processes also played an important role.

Out of this controversy a general picture of tufa formation emerges. Calcium carbonate, the substance of which tufa is composed, has what is known as a low solubility product. This means that calcium and carbonate ions will precipitate out of solution as calcium carbonate even if their concentrations in the solution are extremely low. This precipitation accounts for the purely inorganic

type of tufa formation. When spring-water mixes with carbonate-rich lakewater, most of the springwater's calcium ions are removed from solution through the precipitation of calcium carbonate, forming tufa.

The role of algae in tufa formation assumes importance when calcium ions have been reduced to very low levels by the purely inorganic process described above. In the course of photosynthesis the algae absorb carbon dioxide into their cells. In so doing these microscopic plants modify the delicate equilibrium between calcium, carbon dioxide, bicarbonate and carbonate in Mono Lake. By increasing the amount of carbonate available for combination with calcium ions they facilitate the precipitation of tufa. This process actually encases the tiny algal cells in limestone caskets. The tufa structure, when viewed through a microscope, reveals the shapes of these miniature plants.



An understanding of the processes involved in the genesis of tufa yields insights into other aspects of the spectacular geological history of the Mono Basin. Because their development requires the interaction of calcium-bearing springwater with alkaline lakewater, the larger tufa indicate

where springs once surfaced through the bottom of the lake. Many an afternoon amble through the shrub-covered slopes above Mono's shores is highlighted by the discovery of tufa left hundreds of feet above the present lake level by Mono's ebb. Fantastic visions arise of the time when these patriarchs were forming in an ice-age sea many times larger than that of today. What was this pleistocene landscape like? What birds screamed along its shores? Did brine shrimp cloud its waters even then? With each passing year, our understanding of Mono and its mysterious past grows clearer, ever tantalizing us to further research and reflection.

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- Russell, I. C. 1889. U.S.G.S. 8th Annual Report: 261-394.
- 1893. U.S.G.S. Bull. 108.
- Scholl, D. W. and W. H. Taft. 1964. Journ. Sedimentary Petrology 34: 309-319.

WHO WE ARE, continued from page 3.

On August 15th twenty-two loyal "monophiles" gathered in Berkeley to discuss the future of the lake and our committee. We emerged with new resolve as well as new volunteers to help us promote publicity, produce newsletters and leaflets, coordinate slide presentations and meet and keep in touch with legislators and public agencies. Thus the committee continued to grow and gather strength.

This fall and winter will be active ones, especially for committee chairperson David Gaines, who will be travelling the length of the state to meet with interested groups and individuals. He will be in the San Joaquin Valley between November 1st and 14th, in Southern California between

the 15th and 30th, in the Bay Area during December and back in Southern California during January of 1979. He hopes to meet with many of you during his travels.

David DeSante, David Winkler, Sally Judy, Steve Cunha, Gray Brechin, Gary Gorman and Chris Swarth, outstanding speakers and naturalists all, will also be talking to interested groups. Our newsletters, leaflets, posters and other literature will be upgraded and improved through the assistance, artistic and otherwise, of Gary Haas, John Weston, Erica Buhrmann, Shirley Gordon, Ron Sullivan and Joe Eaton. Doris Sloan and Gary Gorman are helping coordinate slide shows and media publicity in the Bay Area. Richard May is conducting our correspondence with legislators and government agencies.

People have also volunteered to disseminate information, organize activities and, in general, represent the committee on a local basis. These "regional representatives" are the heart of our grassroots campaign to win people to the cause of the lake. Their names and addresses are listed in the adjoining box.

YOU are the Mono Lake Committee TOO. Help us however you can to defend this irreplaceable natural treasure.

#### HELP US PUBLICIZE MONO'S PLIGHT

This summer, as birds and biologists gathered on Mono's shores, the Mono Lake Committee was busy marshalling support for saving the dying lake. Through field trips and talks we reached hundreds of people. BUT WE NEED TO REACH THOUSANDS MORE NATION-WIDE! To do so, we need your help.

(1) Can you arrange talks to interested groups in your community? We have knowledgeable volunteers willing to present Mono Lake slide programs in California this fall, winter and spring. If you are willing to schedule and publicize a talk, please contact our closest regional representative.

#### MLC REGIONAL REPRESENTATIVES

##### Mono County:

Susan Armstrong and Diana Cooke  
PO Box 7062  
Mammoth Lakes, CA 93546  
714/934-3778

##### Sacramento Valley:

Dean Jue  
1513 Tulane Dr.  
Davis, CA 95616  
916/756-3849

##### San Joaquin Valley:

Robert A. Barnes  
PO Box 269  
Porterville, CA 93257  
209/784-4477

##### Southern California:

Mort and Edith Gaines  
3045 McConnell Dr.  
Los Angeles, CA 90064  
213/838-4909

(2) Can you help us get the Mono Lake story into newspapers, newsletters and magazines, or on radio and television? We will gladly furnish factual material photographs and other assistance.

#### WHAT ELSE YOU CAN DO

Please circulate the enclosed petition and return it to the Mono Lake Committee. If you need more copies, let us know or, better yet, make your own copies or facsimiles. If enough people sign, the powers-that-be should take notice.

Bring Mono Lake's plight to the attention of your Audubon Chapter, Scout Troop, Garden Club or other local group. Ask them to endorse the position of the Mono Lake Committee and have them send us a letter expressing their support.

If you reside in Mono County or vacation there, please write to the Mono County Supervisors expressing your feelings about the lake. Write to: Mono County Board of Supervisors, Bridgeport, CA 93517. We'd appreciate copies of your letter and the supervisor's response.

REFLECTIONS

Journal entry, 1 August, 1978

Today, while they shut off Lee Vining Creek, I followed a well-worn path up the scree to the summit of Mt. Dana. Snowmelt, released from months of icy imprisonment, was running in rills and freshets among carpets of white-petaled phlox and golden draba. To the east towering thunderheads spawned shadows across the blue expanse of Mono Lake 6000 feet below. To the north Mt. Conness and to the south Mt. Lyell, mantled in ice and snow, shone through a thin, sickly haze. To the west the mountains disappeared into the central valley smog.

The trail up Dana is a narrow sterile swath through mountain gardens. We humans always seem to tread the easiest route, crushing plants that we could step over. I conspire in the destruction and even rip flowers apart just to ascertain their scientific names.

How to walk gently on the earth?

Guiding my '64 Plymouth down the wide road cut and paved onto the shoulder of Lee Vining Canyon, I ponder these thoughts:

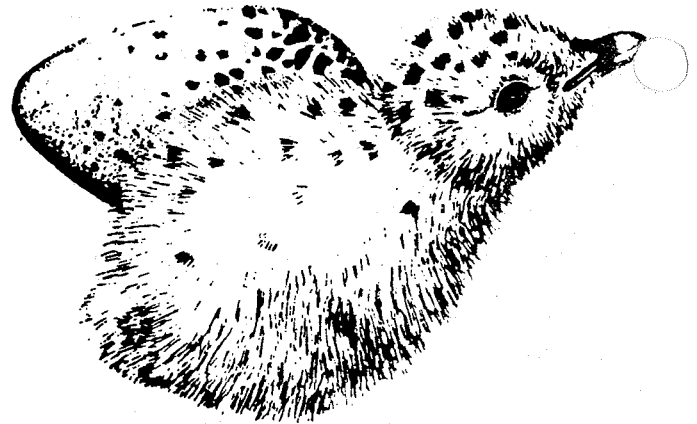
At issue at Mono Lake is more than beauty and wildlife. At issue is our role in the evolutionary drama of life on earth.

Shall we continue to selfishly and profligately deplete the very resources which sustain life on earth? Or shall we choose to share with other plants and animals, perceiving ourselves, not as all-powerful masters, not as slaves, but as enlightened earth housekeepers, as brothers and sisters to all living things.

WE NEED YOUR FINANCIAL SUPPORT TOO

We receive no funds from the Audubon Society. All our time is volunteered. Your tax-deductable contributions will help pay our phone bills, travel expenses, and publishing and mailing costs.

By the way, BUMPER STICKERS, emblazoned with the words LONG LIVE MONO LAKE in attractive blue letters, are now available. We ask a minimum donation of one dollar.



Please fill out this coupon and send to:

**Mono Lake Committee**  
**P. O. Box 2764**  
**Oakland, CA 94602**

Make checks payable to:  
Santa Monica Bay Audubon Society.

I want to help Mono Lake live on.  
Here is my contribution for:

- \$10 regular contributor
- \$5 student and fixed income
- \$25 sponsor
- \$100  I'm interested in promoting
- \$500 local publicity
- \$1000  I'm willing to write letters

name \_\_\_\_\_

address \_\_\_\_\_

city \_\_\_\_\_

state \_\_\_\_\_

zip \_\_\_\_\_

PLEASE HELP MONO LAKE

We the undersigned share the conviction that Mono Lake is an irreplaceable natural treasure. We advocate stabilizing Mono Lake at its 1976 surface elevation of 6378 feet. This will still allow an average annual diversion of about 25,000 acre-feet per year for human use. The islands will still exist, millions of birds will still have a place to nest, rest and feed, and the eastern Sierra will not be plagued with alkali dust pollution.

Name Address

1.	
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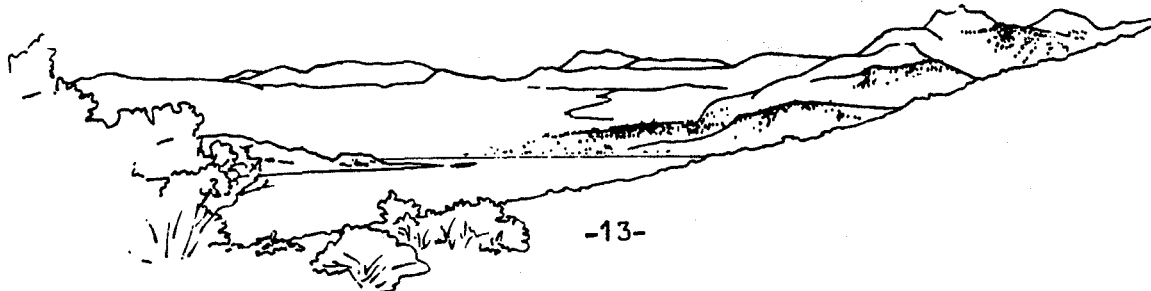
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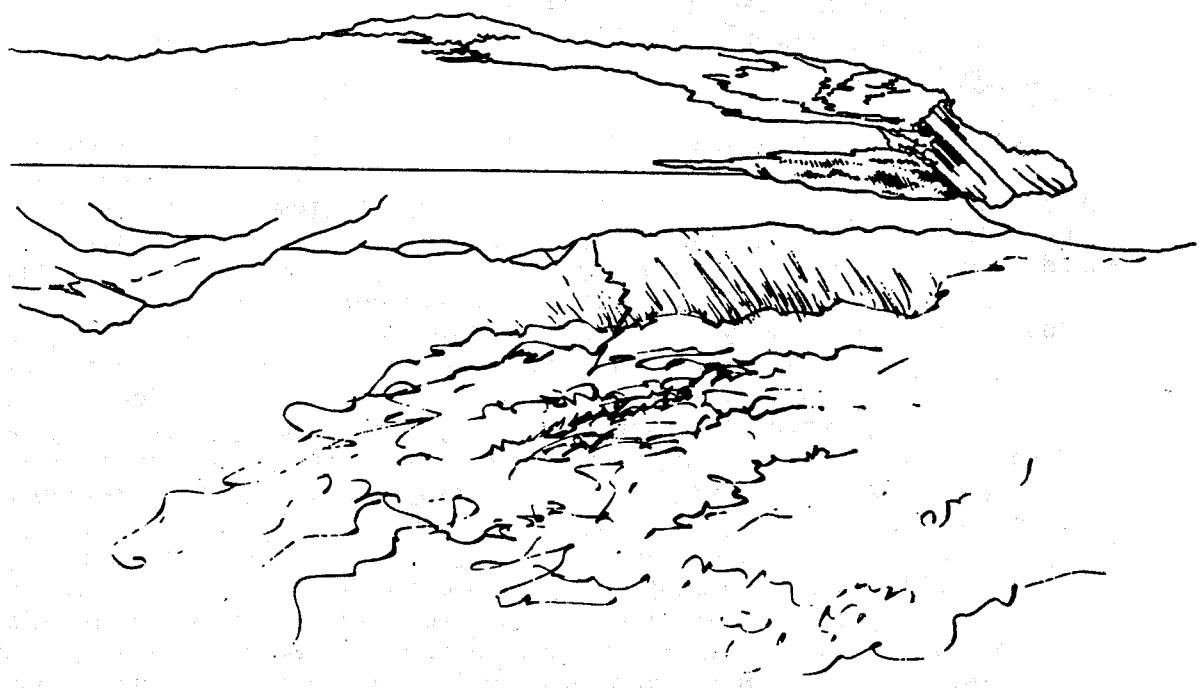
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