

Mile-High Mono Lake

By Walter Chalfant



Some pages of Mark Twain's *Roughing It* are given to that author's observations during a few days' stay at Mono Lake. Aside from his humorous fancies, he gave a good general idea of that interesting inland sea. More accurate information is obtainable from reports of engineers, particularly those of the United States Geological Survey, whose findings are embodied in volumes seldom seen by the general reader.

The lake's present area is given as 85.5 square miles. In ancient times, watermarks show, it was more than three times as large. Its dimensions then were 28 miles by 18 miles. It washed the steep rises of the Sierra on the west and spread to the northeast into the Aurora Valley, southeast of the present site of Bodie, and east to where the Nevada-California boundary is now located. It was fed by melting glaciers in Sierra canyons.

It is the highest of the inland seas. The Geological Survey reported its altitude in October 1906 as 6,428 feet. The water has risen in our own day, contrary to the usual rule of these inland bodies of water, for roads formerly in use along the west side are now under water. Suppositions as to the depth have been varied, in many cases nothing short of wild. The Geological Survey made many soundings. The deepest was near the south end of Negit Island, 152 feet. The average of soundings over 85.5 square miles was 61.5 feet.

Geologist I. C. Russell seems to have given the islands their names. His report said: "In the legends of the people who inhabit the region in scattered bands, there is a story about diminutive spirits, having long wavy hair, that are sometimes seen in the vapor wreaths ascending from hot springs. The word 'paoha,' by which these spirits are known, is also used at times to designate hot springs in general. We may therefore name the larger island Paoha island, in remembrance perhaps of the children of the mist that held their revels there on moonlit nights in times past. The island second in size we call Negit, the name being the word for blue-winged goose."

The water is intensely chemicalized. Different analyses have been made; those with a curiosity in this direction can find information in *Saline Deposits of California*, published by the State Mining Bureau.

Mark Twain's humorous fancy gives as graphic understanding of the effect of the water on flesh and blood as a more serious explanation would do. He wrote: "We had a valuable dog. He had raw places on him. He was the rawest dog I almost ever saw. He jumped overboard one day to get away from the flies. But it was bad judgment. In his condition, it would have been just as comfortable to jump into the fire. The alkaline water nipped him in all the raw places simultaneously, and he struck out for the shore with considerable interest. He yelped and barked and howled as he went, and by the time he got to shore there was no bark in him, for he had barked the bark all out of his inside, and the alkali water had cleaned all the bark off his outside, and he probably wished he had never embarked in any such enterprise. He ran around in a circle, and pawed the earth and clawed the air, and threw double somersaults, sometimes backward and sometimes forward, in the most extraordinary manner. He was not a demonstrative dog as a general thing, but rather of a grave and serious turn of mind, and I never saw him take so much interest in anything before. He finally struck out over the mountains, at a gait which we estimated at about 250 miles an hour, and he is going yet. That was about nine years ago. We look for what is left of him along here every day."

There is little life apparent in the waters of the lake except a small white worm, the pupa of a fly. Small shells containing this creature cling to rocks under water until they loosen and are driven ashore in great windrows. In olden times they were gathered up by the Indian women, who dried them in the sun and rubbed off the shells, leaving a small yellowish kernel of worm, which was dried and used as food.

One of the notable facts about Paoha is the number of sea gulls seen there; these come from the distant Pacific to establish home sites and raise their young. They follow the courses of the tributary creeks, catching trout along the way. Former residents of the town of Bodie claim that many of the eggs sold on its restaurant bills of fare were gull eggs gathered from the lake islands. Why not?

Scientific investigators have had much to say of the volcanic action which prevailed in that vicinity. Said one: "The magnificence of the scene when the Mono Craters were in eruption is beyond description. The ancient sea must have been ice-bound for many consecutive years, and perhaps for centuries. Again a change of climate would unfetter its waters and call back the sea birds to haunt its shores. At all times its scenery was stern and wild." We are told that the crater on Paoha and that nearest to the south shore of the lake are the most recent. A coulee descending into the lake without change of contour indicates that the surface of the water at the time of the formation may have been lower than now. The largest crater on the island is 150 to 175 feet deep. Negit Island is composed of a crater and a lava coulee. The crater is unlike any other in the basin.

Another strange fact is mentioned: "Several acres on the southern shore a mile east of the end of the Mono Craters are covered with irregular tubular trunks from a few inches to five or six feet in height, with a diameter of five or six inches. The formation as a whole resembles a forest of gnarled and distorted trunks changed to stone. The trunk-like masses are simple tubes with solid walls, but are traversed by many irregular passages which open at the top in a number of small orifices. They are porous and cellular throughout. The impression which this imitation forest leaves is weird and uncanny. A group of these domes rises from the shore near Black Point in water that is ten or twelve feet deep, to a height of about twelve feet above the lake surface. Many of them are vase-shaped, being smallest at the water's edge and nearly circular in outline."

Among the other volcanic phenomena related to those hot times about the lake are Glass Mountain, 11,127 feet high, the summit of which is said to be composed of obsidian, and the curious depression known as the Devil's Punch Bowl, near the now unused road between Long Valley and Mono Mills. The Punch Bowl is a great funnel, with uniform slopes of sand which promise plenty of toil to anyone who ventures down into it.

Many small springs along the western side of the lake are indicated by oily lines produced where the fresh water mingles with the heavier water of the lake, and by bubbles of gas rising to the surface. It may be that the oily appearance has helped to stimulate the occasional hopeful companies which have drilled for oil in the vicinity, without success.

A high wind across the surface of the lake raises a fine spray that in appearance resembles dust blown from a plain. Geologist Russell states: "When Lake Mono is agitated by the wind, the waves break into foam which gathers along the leeward shore in a band many rods wide and sometimes several feet thick. Sheets of this tenacious froth are driven inland through the desert shrubs in fluffy masses that look like balls of cotton. This peculiar effect of strong winds on alkaline waters is highly picturesque and adds greatly to the beauty of the lake."

Calm Mono Lake is a glassy mirror reflecting the surrounding mountains. It may change quickly, and woe betide the luckless individual who may be out upon it in an unstable craft. The morning of May 29, 1898, was clear and calm. A little later a stiff breeze arose, and a party of six men concluded to go out in a naphtha launch to see how the craft would behave in rough weather. Mrs. Nye, at what is now Tioga Lodge, watched them

through a telescope. The boat became unmanageable when the breeze became a gale, supposedly because intruding water stopped the engine. The lake was a surface of tossing waves. The boat, having insufficient ballast for its height, was easily upset. None of the men escaped drowning. There is an Indian legend that he who drowns in Mono Lake is lost forever. There are theories of subterranean caverns into which bodies drift. In that case, at least, the lake never gave up its dead. The launch was afterward found floating upside down with its machinery in good condition except for the water in it.

There is occasional speculation as to whether or not Mono Lake is destined to dry up when its inflowing streams are diverted into channels to carry them out of the basin-whether it will suffer the fate that has overtaken Owens Lake in a short span of years. "The temperature in that basin does not reach the high maximum of the surroundings of Owens Lake and evaporation is consequently slower; and even with the withdrawal of all its inflowing waters its reduction would naturally take a longer time. Besides these factors, Mono has a larger supply of water that will not be affected by stream diversions, in its springs. Besides the dozen or so the geologists found around its borders, an unknown number are in its bed. Some are warm or hot, and reveal their existence by vapor seen rising from the surface above their locations. One with a temperature of 110 degrees rises at Hot Springs Cove on Paoha Island, just within the margin of the lake. Vapors escape from numerous holes and vents on the island, visible for a long way on cold days. Occasionally the usual wreath of vapor becomes a column of steam hundreds of feet high, indicating [the geologists concluded] that the vent becomes clogged and is cleared by some sort of eruption. Temperature observed there was 150 degrees. Large springs come up near one of the islands, and in calm weather have force enough to produce eddies on the surface, after rising through ten or twelve feet of water. Some of them emerge from the tops of submerged tufa towers from twenty to thirty feet high, clustered in groups. The upward rush of water from the orifices in the summits of the towers is sufficiently strong to deflect a boat when allowed to, float over them." So said the geologist's report.

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