membrane which forms at the same time) until its internal pressure is compensated by the tension of its membrane.

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August 31, 1910

COMPARATIVE ANALYSES OF WATER FROM THE GREAT SALT LAKE

From about 1900 until 1904 fears were expressed that the Great Salt Lake was doomed to extinction, and that it would be a matter of only a few years until its site would become a salt desert. The recession of the shore line and sinking of the lake level continued until the autumn of 1903. Since that time there has been a rise in the level of the lake, and during the year just ending new fears have arisen—fears that large engineering works like the Lucin cut-off of the Southern Pacific and the roadbed of the Western Pacific railroad would have to be abandoned. A succession of years with abnormally high rainfall is responsible for the condition now existing.

TABLE I

Date of Collection	Specific Gravity	Total Solids Per Cent. by Weights	Grams Liter	Authority
1850	1.170	22.282	260.69	L. D. Gale
Summer 1869	1.111	14.9934	166.57	O. D. Allen
August 1873	1.102	13.42	147.88	H. Bassett
December 1885	1.1225	16.7162	187.65	J. E. Talmage
February 1888	1.1261			J. E. Talmage
June 1889	1.148			J. E. Talmage
August 1889	1.1569	19.5576	226.263	J. E. Talmage
August 1892	1.156	20.51	238.12	E. Walker
September 1892	1.1679	21.47	250.75	J. E. Talmage
1893		20.05		J. T. Kingsbury
December 1894	1.1538	21.16	244.144	J. E. Talmage
May 1895	1.1583	21.39	247.760	J. E. Talmage
June 1900	1.1576	20.90	241.98	H. N. McCoy and Thomas Hadley
July 1900	1.1711	22.89	268.09	H. W. Sheley
August 1900	1.1805	23.36	275.765	H. W. Sheley
October 1900	1.1860	24.03	285.020	H. W. Sheley
September 1901	1.1979	25.221	302.122	L. J. Seckles
October 1903	1.2206	27.72	338.36	William Blum
June 1904	1.1905	25.196	299.96	J. E. Talmage
November 1904	1.2120	26.71	323.71	William Blum
October 1907	1.1810	22.92	270.685	W. C. Ebaugh and Kenneth Williams
October 1909	1.1561	20.887	242.25	Wallace Macfarlane
February 1910	1.1331	17.681	200.32	Wallace Macfarlane

The above values are taken in part from "The Great Salt Lake," by J. E. Talmage, and all the analyses during recent years have been made in the laboratories of the University of Utah.

TABLE II

Sample Collected	Oct., 1903	Nov., 1904	Oct., 1907	Oct., 1909	Feb., 1910
Specific gravity	1.2206	1.2120	1.1810	1.1561	1.1331
Total solids	27.72 %	26.71 %	22.92 %	20.88 %	17.68 %
Constituents					
Chlorine (Cl)	15.27 %	14.54 %	12.67 %	10.91 %	9.48 %
Sulphate (SO_4)	1.86	1.82	1.53	1.39	1.05
Magnesium (Mg)	0.155	0.43	0.45	0.447	0.391
Calcium (Ca)	0.045	0.055	0.04	0.080	0.055
Sodium (Na)	9.58	8.77	7.58	7.25	5.79
Potassium (K)	0.73	0.89	0.72	0.76	0.88

An inspection of the results of analyses of the lake water will be of interest. In Table I. are shown the specific gravity and total solids obtained by investigators at various times during the last forty or more years, and in Table II. more complete results of the latest analyses are recorded. In this connection, it should be remembered that the annual variation of the lake water shows a minimum of total solids in the spring, following the winter and spring precipitation, and a maximum in the autumn.

W. C. Ebaugh
Wallace Macfarlane
University of Utah

A RARE FISH FROM THE NEW JERSEY COAST

A specimen of *Polyprion americanus* (Bloch and Schneider) was captured with hook and line by Captain Harry Maddox, eight miles off Asbury Park, N. J., on August 21, 1910. This species, known as the wreck-fish or stone-bass is said to be not uncommon in European waters, where it reaches a large size—five to six feet in length. Only a single specimen has been recorded heretofore on the American side of the Atlantic, taken by the U. S. Fish Commission in the Gulf Stream off the Grand Banks.

The specimen taken by Captain Maddox is therefore not only new to the New Jersey list, but is also the first to be recorded near the coast of the United States. It measured a trifle over ten inches and weighed thirteen ounces.

It was sent to the New York Aquarium for identification and has been turned over to the collection of the American Museum of Natural History.

Raymond C. Osburn
The New York Aquarium