

618 EARTH MOVEMENT IN THE GREAT LAKES REGION.

Computation of the height of the gage zero at Sacketts Harbor, New York, above the gage zero at Charlotte, New York, in the summer of 1896.

Date.	Hour of commencing observation.		Number of five-minute readings.		Mean of readings.		Difference.
	Sacketts Harbor.	Charlotte.	Sacketts Harbor.	Charlotte.	Sacketts Harbor.	Charlotte.	
1896.					<i>Feet.</i>	<i>Feet.</i>	
Aug. 8	7.45 a. m.	7 a. m.	13	13	0.984	0.962	—0.022
8	6.30 p. m.	6 p. m.	13	12	0.912	0.931	0.022
Sept. 9	5.30 a. m.	7 a. m.	13	13	0.351	0.428	0.077
11	5.00 p. m.	6 p. m.	13	13	0.270	0.368	0.098
Oct. 27	8.15 a. m.	7 a. m.	15	11	—0.118	—0.048	0.100
Mean							+0.055 ±0.014

The bench at Charlotte is a mark on the upper surface of the water table of the old light-house. The walls of the building show no cracks, and there is every reason to believe the bench stable. On May 11, 1874, the zero of gage was found by Mr. E. S. Wheeler, assistant engineer United States Lake Survey, to be 33.003 feet below this bench mark. On June 30, 1896, I leveled from the zero of the present gage to the bench mark, obtaining 38.950 as the mean of two measurements. On July 11, 1897, Mr. Warner W. Gilbert obtained 38.954 feet as a mean of two measurements.

The only bench mark existing at Sacketts Harbor in 1874 and 1896 is a point on the upper outer edge of the water table at the northeast corner of the stone building known as the Masonic Temple. In May, 1874, this was determined by Mr. Wheeler to be 12.225 feet above the zero of gage. On June 28, 1896, by duplicate measurements, I found it to be 20.425 feet above the zero of the present gage. The building bearing this mark rests on a foundation of bed rock, but nevertheless has yielded to such extent that its walls are cracked. I was informed that the cracking and repairing of the walls took place some years previous to 1874, and regard it as probable that there has been no change since that date in the height of the bench mark.