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† WHY THE WEATHER † Mailed January 20, 1928

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SEICHES ON THE GREAT LAKES

In a recent comprehensive report on the hydrology of the Great Lakes by Messrs. Horton and Grunsky an account is given of the oscillations of level, known as "seiches," to which these lakes and others are subject. The movements in question resemble the rocking back and forth of the water in a washbowl that has suddenly tilted and then allowed to stand. The water continues to swing back and forth like a pendulum until its momentum is exhausted by friction.

"Seiches," say these writers, "may be caused by any force that heaps the water up on one shore and then ceases to act. Wind storms are the most common and effective cause of seiches on Lake Erie, while barometric changes are perhaps a more important cause of seiches on Lakes Michigan and Huron. Changes of level due to wind or barometric effects merge into seiches when the cause ceases to operate. The longitudinal vibration period for Lake Erie is 13.1 hours and this is the observed period of one of the principal types of seiches. Seiches having periods of 2.6 hours at Cleveland and 3.7 hours at Buffalo also occur and probably result from transverse vibration of Lake Erie.

On October 27, 1910, a seiche amounting to more than 3 1/2 feet was observed at Buffalo.

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