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SOME CHEMICAL ASPECTS OF THE LIMNOLOGY OF THE LAKES IN THE OKOBOJI REGION

BEN H. PETERSON

The mineral content of several lakes, bogs, springs and ponds in the Lake Okoboji region show wide variation in quantity and ratio of dissolved salts. The dissolved Oxygen, alkalinity, conductance and pH of West Okoboji and East Okoboji have been measured at intervals during the summer months of 1937 and 1938. The thermocline develops slowly in West Okoboji, deep lake, and reaches full development late in July. This condition then remains for the remainder of the summer. Spirit Lake, East Okoboji, which are typical shallow lakes, develop thermoclines which are disturbed by strong winds. Occasionally hydrogen sulfide develops in the bays to such an extent that absorbed oxygen is completely removed from the water.

The mineral content of the cold spring bog water, shows similarities in bogs widely separated. Some of these bogs contain sulfur bearing springs.

The pH of a large number of pond waters was determined and compared with the algae growth present.

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THE FORMATION OF GAS BUBBLES IN LIQUIDS

W. G. EVERSOLE AND G. H. WAGNER

Gas bubbles which were formed by passing nitrogen through a glass capillary into liquids were studied by means of stroboscopic frequency measurements, rate of gas flow, and instantaneous (approx. 10^{-5} sec. exposure) photographs. The size of the bubbles was determined both from the frequency and rate of gas flow and from measurements of the photographic images of the bubbles.

The following pure liquids and solutions were used at room