

of twenty-eight years the water has fluctuated from 18 inches above to the same distance below the mean level for that period. The relationship between the rainfall and the stage of water in this lake, however, is not very apparent. The range of the yearly rise and fall is greater in this than in any of the other lakes, having been as much as 4 feet in 1867; the highest water taking place in May and the lowest in mid-winter.

In Lake Erie the mean level from 1859 to 1887 was 2 feet below the high water of 1838. Although the records are not printed to date there is every reason to believe that since 1887 the water in this lake has fallen similarly to that of Lake Huron, of which we have records. There has been a gradual fall from 1859 to 1872, and a corresponding rise to 1887, but not so marked as in Lake Ontario. The fluctuations on either side of the mean line have not been so great as in Lake Ontario, nor has the yearly range exceeded  $1\frac{3}{4}$  feet, excepting twice.

For Lakes Huron and Michigan the mean level from 1859 to 1887 was 2.8 feet below the high water of 1838. There was a period of low water from 1864 to 1869; again in 1872-73, also in 1879 and 1880. The water then rose steadily to 1886, and has fallen over 3 feet since, or to  $1\frac{1}{2}$  feet below the mean level of 1859 to 1889. The average yearly fluctuation is about 15 inches. In those two lakes the periods of high water have been attended by copious rainfalls, and *vice versa*.

For Lake Superior the mean level from 1859 to 1887 is given as 3 feet below the high water of 1838, and this level has been maintained very steadily to the present time. The relationship of the lake level to the rainfall is not very evident here. The yearly fall and rise is about one foot.

In all the lakes, excepting Lake Superior, the period from 1881 to 1886 was attended by high water, its level during the principal summer months having been 1 foot higher than the mean from 1859 to 1887. This period was sufficiently long for men who had not studied the previously recorded movements of the waters to conclude that