

A Science Service Feature

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? WHY THE WEATHER ?

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RAINFALL TRENDS

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J.B. Kincer, of the United States Weather Bureau, has recently brought to light some striking "trends" of rainfall in the United States. His process involves the use of so-called "10-year moving averages." He takes the average for the first ten years of a rainfall record; then the average of the second to the eleventh year, inclusive; then that of the third to twelfth year, inclusive; and so on. These averages of successive overlapping periods are plotted as a curve, which is much smoother than one drawn from the rainfall totals of successive individual years.

A curve thus prepared from the rainfall records by states of the northern states of the Middle West, where drought is now causing so much anxiety, shows a marked decline since the year 1908. In Minnesota, for example, the average for the ten years ending with 1908 is 29 1/2 inches, while for the decade ending with 1933 it is a little less than 23 inches -- a decrease of more than 20 per cent. A falling off of rainfall to this extent is a serious matter in a region where the normal rainfall is comparatively small for agricultural purposes. The decline of rainfall centering in Minnesota covers the northern Plains on the west and the western Lake Region on the east.

A long rainfall record for St. Paul shows that conditions similar to those now observed there have occurred twice before in the last hundred years. The curve derived from moving averages shows three minima; viz., the averages for the 10-year periods ending 1848, 1894 and 1933. The averages for these minima were about the same.

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