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A Science Service Feature

? WHY THE WEATHER ?

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HOW SPRING ARRIVES

The late Prof. Mark W. Harrington, once chief of the United States Weather Bureau, published long ago in Harper's Magazine an instructive article in which he described and charted the progress of spring, in an average year, over the United States and southern Canada. The criterion adopted for the beginning of spring was the occurrence of a mean daily temperature of 43.8 ^{Fahrenheit.} This is one degree higher than the temperature generally regarded by botanists as that at which most common plants of the temperate zone awake from their winter sleep and resume their vegetative functions. Harrington compiled records for the 15-year period 1870 to 1885, on the basis of which he prepared a chart showing the average location of the isotherm of 43.8 on the first day of each month from February to May, inclusive.

The lines representing these successive locations show a number of interesting local irregularities - such as a marked northward jog in the middle Mississippi valley - but their most remarkable feature is their strong northward bend as one goes westward across the continent. In other words, spring in general advances from west to east as well as from south to north. It is far earlier on the Pacific coast than elsewhere. Thus the Willamette valley of Oregon has a spring that is about two months earlier than that of the Hudson and Connecticut valleys in the East. The general progress of the season from west to east is much retarded by the Great Lakes. Marquette and Alpena are as late as Ottawa and northern Maine, lying far to the east of them.

While averages for a period of years show a steady advance of the critical isotherm, in any individual year it moves forward fitfully. Harrington compares its movements with those of the wavelets of an incoming tide; alternately advancing and retreating, but gaining more ground in its advances than it loses in its retreats.

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