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A Science Service Feature

? WHY THE WEATHER ?

Dr. Charles F. Brooks,

of Clark University,

discusses:

WHEN RIVERS ARE FULL, WINTER COMES

There is a proverb in the northeastern United States to the effect that "when rivers and swamps are full, winter comes." It is the common impression that winter never starts in after a dry autumn before copious rains have soaked the ground. This impression is not infallible, however, as there are instances on record contrary to it. The conditions in the last three months of 1923 can be taken as a typical illustration of the rationale of such a proverb. Unusually dry, quiet weather prevailed generally in the eastern United States and eastern Canada until late in November. Then a quick procession of heavy rain storms developed which, in the course of two weeks, provided abundant rainfall over large areas and thoroughly prepared the ground in the proverbial manner for the coming of winter.

The onset of these storms with their rainfall seems to have been definitely connected with the establishment of a strong temperature gradient between the interior of the continent and the relatively warm Gulf of Mexico and Gulf Stream. Usually such a gradient and such storminess become well established by the end of October. This year, however, owing, apparently, to unusual coolness of the waters of the western Atlantic the contrast sufficient for storms did not become established until the interior had cooled more than usual. Thus the northeast had a dry fall followed by a wet spell and then by winter weather as the flows of cold air from the northern interior of our continent spread over the eastern United States.

Somewhat the same situation prevailed in the Pacific States, and, although there were some unusually early snows in the Sierras, the weather was generally mild and dry until early in December.

(Tomorrow: Weather Healthful Last Quarter 1923.)

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