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A Science Service Feature

March 17

? WHY THE WEATHER ?

Dr. Charles E. Brooks,
of Clark University,
tells of:

MARCH COLD WAVES

For a cold wave, as officially defined, it is required that within 24 hours the temperature shall fall at least 20 degrees Fahrenheit, except in the far south where a drop of 16 degrees or 18 degrees Fahrenheit constitutes a cold wave. Moreover a change from say 70 degrees to 50 degrees Fahrenheit is not called a cold wave, but the temperature must reach a definite lower limit, which varies with the place and time of year. For instance, from March to November in the central states and southern New England, the forecast of a cold wave means that the temperature is expected to fall at least 20 degrees Fahrenheit and to reach 24 degrees Fahrenheit or lower.

Cold waves are brought about by a sudden change in wind direction, wind velocity, or both. In March, when large temperature contrasts occur in relatively short distances, when lows are vigorous and winds strong, conditions are ideal for the development of sharp and sudden cold waves. The cold air moves rapidly and descends in the northerly winds following the passage of a low. Moreover, the clear dry air on the following side of a low favors further cooling at night by radiation.

In the eastern United States the March cold wave comes typically from the Hudson Bay region. For the Hudson Bay region, Labrador, and northward are the coldest portions of North America in spring. The dry and cloudless interior plains of Canada warm more readily than the snow covered northeast which reflects most of the spring sunshine.

(Tomorrow: Vegetation Awakens Northward and Upward)
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