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A Science Service Feature

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? WHY THE WEATHER ?

Dr. Charles F. Brooks,
of Clark University
describes:

MEASURING HUMIDITY IN WINTER

The dampness, or relative humidity of air, may be determined in several ways. One method is to find the difference in the temperatures recorded by an ordinary dry-bulb thermometer and one with a bulb thinly wrapped in wet muslin. Both thermometers are fanned or whirled in the air together. The drier the air the more rapid will be the evaporation and the lower will be the reading of the wet thermometer compared with that of the other. If a clean fog is forming no evaporation will take place and the two thermometers will usually read alike. Then we say the relative humidity is 100 per cent.

In winter when the temperature is below freezing, this method of measuring humidity is unsatisfactory because the wet cloth around the thermometer may or may not freeze.

This difficulty may be readily avoided by the use of a hair hygrometer. The hair hygrometer is essentially a bundle of oil-free human hair so fastened that its changes of length are shown by the movement of an indicator. The Weather Bureau has recording hair hygrometers, called hygrographs, at many stations. As dampness increases, the hairs lengthen almost in exact proportion to the percentage change in relative humidity.

(Tomorrow: Clouds Are Lower in Winter)

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