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? WHY THE WEATHER ?

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THE PSYCHROMETER

The reading of a thermometer is lowered when its bulb is moistened, unless the surrounding air is charged to its full capacity with moisture. This effect is due to evaporation, and the lowering of the reading bears a definite relation to the humidity of the atmosphere; hence by comparing the readings of two thermometers, one with a dry bulb and the other with a wet, it is possible, with aid of certain calculations or by the use of appropriate tables, to measure atmospheric humidity. Such is the principle embodied in the instrument called a "psychrometer" a name that means literally a "measure of cold" and was once applied to the ordinary thermometer.

Several forms of psychrometers are in use, but they always consist of a pair of thermometers, one of which has a piece of muslin or other fabric wound around its bulb, which is moistened before an observation. In the "sling psychrometer" the thermometers are mounted on a metal frame, with a handle attached for whirling the device through the air. The U. S. Weather Bureau uses a psychrometer mounted on a fixed frame and whirled by turning a crank. In the "aspiration psychrometer" both dry and wet bulbs are ventilated by a clockwork-driven fan. In all the devices just mentioned the movements involved serve to bring the reading of the wet-bulb thermometer rapidly to its lowest point. Some psychrometers, however, remain stationary, the wet bulb being kept constantly moist by a wick connected with a vessel of water.

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