

A Science Service Feature

Released upon receipt
but intended for use
June 21, 1934

? WHY THE WEATHER ?

Mailed June 14, 1934

KEEPING COOL

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Human sensations of temperature register the ease or difficulty with which the physiological heat-regulating mechanism adjusts itself to the combined effects of air temperature, solar and terrestrial radiation, humidity and wind; and widely different combinations of these external factors produce the same feeling of warmth or coolness. An electric fan does not cool the air, but it cools human beings by carrying away excess heat from their bodies and also by promoting the evaporation of sweat, which is a cooling process. Low atmospheric humidity likewise tends to cool us by increasing evaporation. The temperature of the air itself of course plays an important part in making us feel warm or cool; but the quality of the atmosphere that we seek in hot weather is "coolingness" rather than coolness.

The occurrence of heat-stroke, including sunstroke, bears so little relation to thermometer readings that a few decades ago some medical authorities suspected it to be an infectious disease. We now know, however, that its incidence bears a close relation to the cooling power of the air. Generally speaking it is favored by hot sunshine, high humidity and stagnant air. The introduction of automobiles is believed to have decreased the number of heat prostrations during hot waves, not merely by saving many people the muscular efforts of walking but also by providing them with plenty of breeze in calm weather.

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21st and Constitution Ave.
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