A Science Service Feature

Released on receipt
but intended for use
August 19, 1927

? WHY THE WEATHER ? Mailed August 12,1927

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MEASURING HOT WEATHER

A standing grievance that the average citizen has against the weather man is that the latter insists on measuring temperature in the shade when everybody wants to know how hot the weather is in the sunshine.

Two misunderstandings are involved here. In the first place when a layman talks about the heat of the "weather" he generally has in mind the sensation of temperature experienced by human beings. So far as controlled by meteorological conditions, this depends upon three or four different things: the temperature of the air, the humidity of the air, the amount of air movement, and, if the sun is shining, the intensity of the sunshine. The meteorologist does not attempt to measure this combination of things with his thermometer, but only one of them — the temperature of the air.

This is measured with a thermometer exposed freely to the air but carefully sheltered from the rays of the sun and from reflected heat. Its reading shows the temperature of the shaded air adjacent to it, and this differs little, if at all, from the temperature of the air in full sunshine. A thermometer exposed to sunshine, unless strongly ventilated, by whirling or otherwise, shows nothing but the temperature acquired by the instrument itself, which gets much hotter under the sun's rays than the air does. It may read as much as 50 degrees Fahrenheit above the true temperature of the air !

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