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A Science Service Feature

? WHY THE WEATHER ?

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"HYTHER"

The present hot summer has furnished many illustrations of the absurdity of quoting thermometer readings as indications of "atmospheric comfort." Since it is a well-known fact that a temperature of 100 with a decidedly low relative humidity may imply more comfortable weather than one of 85 with a decidedly high relative humidity -- and that comfort is likewise dependent in part upon the amount of wind blowing -- why publish thermometer readings without humidity and wind data in the newspaper reports of a hot spell?

The anomaly of the procedure is no new idea. One of the earliest attempts to devise a numerical expression of temperature sensations in warm weather was made in the summer of 1902 at Shanghai, China, by W. F. Tyler, of the Imperial Maritime Customs. Twelve persons recorded their sensations each day at noon on a scale of 10 degrees, in which 0 represented perfect comfort while 10 stood for the most uncomfortable hot weather ever experienced at Shanghai. Tyler coined the name "hyther" for the atmospheric element thus recorded. If the hyther was low, people were comfortable; if it was high, they were uncomfortable. Tyler endeavored to work out a definite mathematical relation between hyther on the one hand and the dry-bulb temperature and depression of the wet-bulb temperature on the other.

A similar idea was the basis of the much more elaborate and thoroughgoing experiments of the American Society of Heating and Ventilating Engineers out of which came the scale of "effective temperatures," now used chiefly in measuring indoor conditions but worthy of wider application.

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