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A Science Service Feature

? WHY THE WEATHER ?

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HOW WIND COOLS US

The traveler on a desert dreads the simoom or scorching hot wind. Ordinaril wind cools the body, because air temperatures are usually below body temperatures and because wind promotes cooling by evaporation. But in extreme heat, when the air is much hotter than the body, the opposite is true - the higher the wind the more ~~impossible~~ difficult it is to keep cool, for there is a limit to the rate at which the body can supply moisture for evaporation. With temperatures slightly over 100 degrees a wind may still be cooling if it is dry enough to cause rapid evaporatio from the skin and lungs.

With an air temperature below body temperature, as is usually the case, the cooling power of the wind varies roughly with the square root of its velocity, other things being equal. That is, a wind of 16 miles an hour is twice as coolin as a wind of 4 miles per hour. But other things are not always equal. Suppose it is 90 degrees Fahrenheit outdoors and 80 degrees indoors and no wind. Our ski if dry will feel about twice as hot outdoors because the temperature is only half as far from body temperature. Suppose at such temperatures you motor at 16 miles an hour outdoors, or by means of a fan create a breeze of 4 miles an hour inside. Either of these will make you about equally cool, the temperature difference between inside and out approximately balances the difference in cooling power of th wind produced.

(Tomorrow: Rains in the Interior)

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