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A SCIENCE SERVICE FEATURE

? WHY THE WEATHER ?

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CLOUDS AS SUNSHADES

The outspreading top of a thunderstorm casts its shadow in advance of the shower, and tends to clear away lower clouds. For when the earth is shaded, the intense heating ceases, and with it the rising of air masses whose crests are marked by the detached cumulus clouds. Sometimes when upper clouds are in bands, strings of cumulus clouds may be noticed below the breaks. These lower clouds formed from convection over the hot sunny regions unshaded by the upper clouds.

On a warm day, the shading effect of the low cumulus clouds themselves is very welcome to those below. Often a light breeze is noted in the shadow of such a cloud, where cool air is descending and spreading out near the surface. In bright sunshine, the lower air, clothing, and ground surfaces exposed to the light become quite hot, often 10 degrees or more hotter than the free air 50 or 100 feet above. Shortly, however, after a heavy cloud shadow comes on, much of this excess of temperature is lost.

(Tomorrow: Heat Strokes)

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