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A Science Service Feature

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? WHY THE WEATHER ?

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WHY THE HEAT?

Now that we know how it feels when the weather tries to blow the tops off our thermometers, and when it is no longer necessary to use a stove for frying eggs, let's see how the hateful heat happens. The heat wave of late May and the heat flood of early June began under almost identical conditions, with pressures, winds, and clear skies, as nearly invariably found at the onset of any summer hot spells in eastern North America. The first heat wave began May 19, with clear weather and a southerly wind. Dry descending air allowed considerable heating by the penetrating sunshine, while the southerly wind brought accumulated heat from lower latitudes. Here and there by late afternoon sufficient local heating developed conditions of instability that led to the formation of thunderstorms. The air was cooled somewhat. But evenings and nights were cloudy with remnants of these showers, which effectively prevent much further cooling, so that the next morning started hot again. Then the sun evaporated the clouds and the day's heating began as before, except that the start was at a higher figure and the moisture in the air was less than before the precipitation of some of it in the rains of the preceding day.

The first hot spell was closed with a flood of cold air, but with a return of clear skies and southerly winds on May 27 the great hot spell commenced.

(Tomorrow: Short vs. Long Hot Spells)
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