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? WHY THE WEATHER ?

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TYPES OF ICE STORMS

It is always difficult to forecast an ice-storm, even though such a storm may occasionally travel as far as from Texas to New England. For an ice storm is usually a transition phase occurring in a narrow belt between rain, on the one hand, and sleet and snow, on the other. Every ice storm requires an inversion of temperature, that is, warm air above and cold air below. There are three general wind conditions which produce this combination.

In the first or "southerly" types, warm air arrives over residual cold air. Conditions are ideal when, after a period of high pressure with clear, cold and calm weather, a "low" or cyclone rapidly approaches, furnishing a warm, moist southerly wind. The wind does not immediately displace the stagnant cold surface air, but rises over it. This forced ascent of the moist wind favors the formation of rain, which freezes when it strikes the cold surfaces below.

In the second or "northeasterly" type, two winds are involved, a cold northeast wind coming in below and warm air arriving above. A high pressure area north of a low will give such a combination. In New England, and apparently elsewhere in the East, ice storms of the northeasterly type are the most frequent.

The third type of ice storm is produced by cold air pushing in from the north or west below a raincloud. This "northwesterly" type is about the reverse of the first. Here the cold air apparently enters like a wedge below, while it is still raining, and as the wedge thickens, glaze, sleet, and snow may follow successively. In the first type the reverse sequence is more usual, the ice storm being preceded perhaps by a fall of snow and ending with rain.

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