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? WHY THE WEATHER ?

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WHAT HIGHS AND LOWS ARE

When weather maps were first attempted, it was found that groups of stations in one region would report high barometric readings, while low pressures would be observed in another region. Moreover, these areas of high and low pressure kept their identity and their progress could be followed from day to day. What is the "high" or "low" that appears on a weather map?

In a high there is an extra mass of air and in a low a deficiency. Highs and lows are not exactly hills and valleys in the atmosphere, because the air extends upward indefinitely; they are rather regions of varying concentration or density affecting sometimes only the lower levels. Occasionally a high or low extends 6 or 7 miles upward. Many are only 1 or 2 miles thick. Yet they may be 1000 miles wide!

In a high the air is denser than in a low and the pressure when "reduced to sea level" is usually 30 inches or over. Anything below 29.9 is generally considered low, but it should be remembered that high and low are merely relative terms and cannot be sharply distinguished. For the farther above sea level you go up the less air there is above you and hence the lower the pressure. Thus while sea level pressures commonly vary between 29 and 30.8 inches the pressures on a high mountain like Pike's Peak vary around 16 inches.

(Tomorrow: Muggy Air is Light Air)

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