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? WHY THE WEATHER ?

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COMPLEXITIES OF WESTERN WINTERS

From the Great Plains west to the Pacific coast, winter weather is full of many surprises for the easterner. Cold waves, coming from the northern continental interior, arrive from the north or northeast, instead of from the northwest. Westerly winds are warm rather than cold, for they come from the Pacific instead of from a cold interior. The coastal region most exposed to such winds and protected from the cold of the interior by two or more mountain ranges and low elevation is equable, windy, rainy, and but rarely snowy. The interior valleys are somewhat more extreme in temperature and protected from the wind, but the winds and clouds riding over the low coastal mountains bring plenty of precipitation. It rains very easily - with the approach, passing and retirement of a "low" and with the approach of a "high". Local winds, directed by the configuration of the valleys as the chilled air slides toward the sea, have little significance with respect to the general storms.

East of the Cascades and Sierra Nevadas, which are high enough to "scrape" much of the moisture from the passing winds, it is often warm when the wind blows, but very cold when it is calm. After the great flood of cold air poured over the Rocky Mountains in December and established a snow covering all over the interior plateaus, there was an exceptional opportunity for the development of quiet, very cold weather. When, however, the accumulation of air over the plateaus becomes considerable, and the pressure falls either on the west or the east, a great outpouring takes place, chilling the mild Pacific coast or warming the frigid Great Plains.

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(Tomorrow: Effects of Pressure Changes)  
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