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? WHY THE WEATHER ?

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MOUNTAINS AS MEASURING STICKS

In a mountain or hill country the weather is more interesting than on the plains. On plains one sees clouds approach and thicken, and rain or snow fall from them, but he rarely gets much indication of how high or how far away certain clouds or rainfronts may be. In the mountains some of the vertical dimensions of the weather are emphasized, and distances may be observed. The round-topped, flat-based cumulus clouds of fair weather now intercept the mountain tops, and again sail high above them. When the air is humid a wind up the mountain side will make a more or less permanent cumulus cloud at a height of 500 to 2500 feet above the neighboring lowlands. Low clouds on a damp morning rise during the day, and by late afternoon may be seen, in practically the same form as earlier, with their bases perhaps 2000 or 3000 feet higher.

When there is a group of mountains differing appreciably in height the cloud heights are well shown by ^{the mountains which} are and are not intercepted by the clouds. A low mountain may be touched by ^a low cloud sheet, while a high one at the same time may be surrounded by this low sheet and one or two higher ones as well. Unless some of the mountains are exceptionally high, that is, well over 10,000 feet they will not be reached by the upper clouds such as cirrus. Here is the limit of the ^{mountains} vertical use of as measuring sticks. They show well the heights of low clouds, and at times those of intermediate levels. Thus the relative positions of various cloud groups become evident.

In showing distances mountains are helpful in local indications of coming rainfall. When you see low dark clouds suddenly forming and apparently pouring over a mountain top ten or twenty miles to the west you begin to think of rain. And when you see western mountains, formerly sharp, become blurred, and disappear as a dark cloud approaches, you expect the rain to reach you in a quarter to half hour for every ten miles of distance.

(Tomorrow: How To Make a Hygrometer)
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