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? WHY THE WEATHER ?

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FACTORS IN SUMMER CHARACTERS

About this time of year, people are beginning to ask "Is it going to be <sup>a</sup> hot summer or a cool one?", or perhaps "What kind of a June are we going to have?" Perhaps a discussion of some of the causes of seasonal abnormalities will show why long range forecasts are not at present practicable. Violent volcanic eruptions may produce temperature averaging 1 degree Fahrenheit colder than usual over the whole world. The volcanic dust in the upper air prevents some of the sun's heat from reaching the earth. But it cannot be stated which will be the particularly cold months in the two or three years following an eruption, as other controls are more powerful than volcanic dust. The eruption of Tomboro in April, 1815, may have been to blame for some of the chill of the famous cold summer of 1816, in which frost occurred in every month in much of New England. A second cause of weather abnormalities, changes in the activity of the sun, was probably also involved. The earth is supposed to be about 0.5 degrees Fahrenheit colder than normal during a time of sunspot maximum and 0.5 degrees warmer than usual during sunspot minimum. Changes in the surface temperatures, direction and velocities of ocean currents constitute a third cause of weather abnormalities. The weather of the East in May, 1924, is thought to have been connected with the exceptionally warm water over the Grand Banks at that time. Perhaps ocean variations are merely a secondary and delayed effect of changes in the sun. Variations in the composition of the atmosphere are a possible cause of weather changes. Lastly it may be pointed out that our weather is directly controlled by passing Lows and Highs. The character and routes of these transient Lows and Highs seems dependent upon certain semi-permanent lows and highs known as centers of action. But each explanation stops short of a solution and leaves another "Why" unanswered.

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(Tomorrow: Tree Rings and Weather Cycles)

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