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A Science Service Feature

? WHY THE WEATHER ?

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PEAT BOGS REVEAL FAST CLIMATES

The study of prehistoric climates is one of the romantic undertakings of modern science and is prosecuted in several different ways. One kind of climate record is found in vertical sections of old peat bogs, which show how different types of vegetation have succeeded one another, each corresponding to a certain type of climate.

This record tells a story of some great climatic swings since the time when the ice sheets of the last glacial period withdrew from the temperate zone. According to the so-called Blytt-Sernander hypothesis, there have been two periods of great dryness -- i.e., of continental climate -- alternating with periods of greater humidity -- i.e., oceanic climate -- the second of which includes the present time. These four periods are called the Boreal (the first dry period), Atlantic, sub-Boreal and sub-Atlantic. "The assumptions regarding temperature are not so clear-cut," says Prof. P.B. Sears, "the dry periods being generally considered warm while the moist ones are differently designated by different investigators."

A valuable adjunct in the study of plant sequences in the bogs is the analysis of pollen grains, which are so well preserved that they can, as a rule, be identified under the microscope. During the last 25 years in Europe and more recently in America many cores have been bored through bogs and counts have been made of the pollen of different species found at different levels.

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