A Science Service Feature

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? WHY THE WEATHER ?

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AUTUMN COLORS

What weather conditions influence or control the autumnal coloration of foliage? Dry air, sunny days and cool nights appear to be needed to bring out the brightest colors. An early sharp frost spoils them, instead of enhancing them. Some authorities believe that ultraviolet sunshine plays an important role in coloring the leaves, and some think the coloration depends to a certain extent upon the weather of the preceding summer. The chemistry of the process is now pretty well understood, but not its meteorology.

Before we can learn much about the effects of weather on this autumnal spectacle we need to have an accurate record of its geographical distribution, or, at any rate, of its variations from year to year in certain localities where weather records are maintained. Strange to say, we have neither.

Many phenologists in Europe and a few in Canada keep records of the dates each year when trees and shrubs of certain species change their tints from green to gay, but not of the relative brightness of the display in different years. As to collecting comprehensive information about the parts of the world where bright autumn colors may be seen, only one person, so far as I know, has attempted to do this -- viz, Dr. A. B. Stout, of the New York Botanical Garden -- and his data are still quite fragmentary.

One thing is certain -- though eastern North America as a whole may surpass most other parts of the world in the beauty of the autumn leaf pageant, there are some fine performances of the same sort to be seen elsewhere. Forests along the Rhine and the Danube assume vivid colors in the fall, and the maples near Tokyo stage an annual color show that is world-renowned.

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