

seem to indicate that the spruce-fir climax is slowly invading the deciduous. It therefore seems safe to venture the opinion that the transition belt of the conifer-deciduous forest was perhaps some one hundred miles farther north towards the middle of postglacial time than at the present." The discovery of hickory in the Winchester peat approximately ninety miles north of its present-day range appears to be in agreement with this opinion. The southward movement of the forests and constriction of the prairie areas has been considered as supporting evidence for the Von Post hypothesis (1930) which postulates a period of decreased climatic warmth at present.

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THE PHYLLOTAXY OF CATALPA

FREDERICK O. GROVER

Most descriptions of *Catalpa* and most keys to the genus emphasize the opposite arrangement of the leaves, while they do not mention the whorled arrangement at all, or it is given as a secondary condition. However, according to my observations covering many years, the leaves arise almost always in whorls of three, are only rarely opposite and are occasionally in whorls of four or alternate.



Grover, Frederick Orville. 1942. "The phyllotaxy of Catalpa." *Rhodora* 44, 414–6.

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