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## ABSCISSION.

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This dependence upon external conditions is frequently illustrated by the behaviour of plants in temperate and boreal regions. The weather conditions about Montreal during October and November of the year just past (1913) were peculiar, and they were reflected in the behaviour of shrubs and trees. Many of them began to push out their spring flower buds, and in some instances (*Hydrangea*) partially opened their flowers, while the usually prompt disappearance of foliage in many trees and shrubs was much delayed. The poplars were especially noticeable, retaining their leaves even in exposed situations so that many were retained far into November, while a few still remain at the present writing. *Ampelopsis Veitchii* was also noteworthy in this respect, the conditions having been such that, in some cases, a full half or more of the leaf complement still remains adherent, though dry and dead (February, 1914). I examined these plants and found that the process of abscission had been started, but had been prevented from completion.\* Perhaps, having been delayed by the unusual prolongation of warm weather, the abscission was overtaken by a sudden change and stopped by killing the leaves, whereas, normally, the abscission would have been completed before such intervention. It is possible that an examination of such trees as the black-jack oak, which often fails to shed its leaves, would throw light on this habit. A red beech, planted on the campus of McGill University, constantly retains its leaves, but those especially on the shorter lateral shoots. According to my late colleague, Professor Alcock, this tree shows each year an increasing

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\* Tison found that the marcescent leaves of *Hamamelis* differed from the normally caducous in having an incomplete abscission mechanism or it is not even initiated.