

# FOUR DECADES OF CHANGE IN AN OLD-GROWTH BEECH-MAPLE FOREST IN INDIANA

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## ABSTRACT

Hoot Woods is a 6.6 ha old-growth beech-maple forest. Fully censused every decade since 1965, the forest is one of the most intensively monitored permanent plot stands in the eastern deciduous forest. Although it is set in a highly fragmented agricultural landscape, the stand largely escaped direct anthropogenic effects during Euro-American settlement of the region during the mid-1800s. Currently, natural processes of competitive development, windthrow, gap replacement, and decomposition operate undisturbed. Tornadic disturbance in 1980 influenced several portions of the stand. This study reports findings from the fifth inventory in 2005, discusses patterns of vegetation dynamics over the past 40 years, and assesses patterns of species mortality, recruitment, and persistence in both spatial and temporal dimensions, to examine whether the stand can be characterized as demonstrating compositional stability.