

Changes in tree taxon composition and distribution in western New York over a 200 year time period ca. 1797-1993 were examined by comparing the presettlement land survey with the US Forest Inventory and Analysis (FIA) survey. To ensure data quality, biases in presettlement bearing tree selection and FIA plot locations were assessed. A 6 mile X 6 mile grid of taxa abundances was then estimated using geostatistics. Overall, significant changes in taxon composition occurred, with the taxa most abundant in the presettlement land survey – beech (37.0%), sugar maple (21.0%), and eastern hemlock (8.3%) – being replaced by sugar maple (19.2%), ash (11.7%), and red maple (11.4%) in the FIA survey. Spatially resolved comparisons showed that the landscape changed from fairly spatially homogeneous to more heterogeneous; in the presettlement survey, the most abundant taxon in most of the cells was one of several early successional taxa that each displayed a distinctly clustered geographic pattern of dominance. The clusters of dominance of the different early successional taxa may correspond to environmental factors. This study demonstrates the insights available through spatially resolved analyses of changes in the forest landscape between presettlement and present.

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