ECOLOGICAL FORESTRY IN THE UPPER GREAT LAKES: WHY SELECTION SILVICULTURE IS NOT ENOUGH

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Northern hardwood forest types in the upper Great Lakes region have a long history of management using a single-tree selection approach. On the surface, this approach appears ecologically sustainable in that it maintains continuous forest cover and emulates an important natural disturbance regime, specifically individual tree blowdown. However, wide spread implementation of a selection approach has lead to a region-wide increase in sugar maple dominance in an otherwise species rich forest type. Alternative silvicultural approaches that better emulate the structural and compositional outcomes of larger scale canopy disturbances are being implemented in the region in an attempt to sustain the wider array of canopy species that occur in these forests. These approaches incorporate larger and more intense disturbances to regenerate mid-tolerant conifer and hardwood species, including yellow birch, northern red oak, white ash, eastern white pine. Ecological forestry approaches in the context of northern hardwood silviculture using case studies from the Wisconsin Department of Natural Resources and Menominee Tribal Enterprises will be discussed.