

RED MAPLE DEVELOPMENT IN MIXED HARDWOOD STANDS

IN WEST VIRGINIA

Brian Tift¹

Abstract: Recent evidence has shown that red maple (*Acer rubrum*) may become a more prominent species in eastern mixed hardwood stands. This study will examine the strategies used by red maple to reach dominant and codominant canopy positions on two different stands (one mesic and one drier). Stand level data such as dbh, height, crown class, height class, and age structure will be gathered using 0.02 ha plots covering one-tenth of the area of each stand. Six plots per stand, which must contain a codominant red maple, will be randomly selected as stem analysis plots. One codominant red maple and all competing trees will be felled and stem disks taken at ground level, breast height, and every 1 m thereafter. Sub-canopy red maples will also be felled to determine age and periods of suppression. Possible height growth strategies that will be looked for include: (1) advanced regeneration (red maple maintains initial height advantage over competitors), (2) red maple invades at the same time as competitors and grows in height at an equal rate, (3) red maple invades at the same time and reaches the canopy through a series of releases following suppression. The effect of regeneration type on current canopy position will also be examined.

¹ Graduate Research Assistant, Division of Forestry, West Virginia University, P.O. Box 6125, Morgantown, WV 26506-6125.