

FIELD EFFICIENCY AND BIAS OF METHODS FOR SNAG AND CAVITY TREE INVENTORY

Robert S. Kenning¹, Mark J. Ducey^{1,3}, Jeff H. Gove², and John C. Brissette²

¹University of New Hampshire, Department of Natural Resources, 215 James Hall,
Durham, NH 03824

²Northeastern Research Station, USDA Forest Service, Durham, NH

³Author for correspondence. mjducey@cisunix.unh.edu

Snags and cavity trees are important to the structure and ecological function of forest ecosystems, yet due to operational sampling difficulties and limited resources snags are often not included in forest inventory. This study tested N-tree distance sampling as a new time saving device for snag assessment and compared N-tree distance sampling to fixed area sampling and modified horizontal line sampling (MHLS). Also presented is a novel modification of N-tree distance sampling that limits the area an observer must search to find tally trees. Results show N-tree distance sampling to be quick yet generally biased with high variability in snag inventory. Based on our inventory and time trials of all above-mentioned methods, we give recommendations on operational snag inventory in similar forest types.