

Appendix A

Habitat variables and methods (following Seamans 1994, Call 1990, LaHaye 1988, Bias 1992).

Variable	Method
Elevation	elevation measured with an altimeter
Aspect	aspect measured with a compass
Slope	slope measured with a clinometer
Canopy closure	percent of canopy closure of plot, taken as average of visual estimates from each cardinal direction (4)
Number of potential nest	number of trees in tally with a) a cavity >48cm along its axis, b) a broken top >53cm diameter with live branches over it, or c) an existing platform nest trees >60cm diameter
Plot maturity	estimated visually for the plot (overmature, old growth, mature, maturing, young)
Strata	number and type of distinct vegetative layers (canopy, subcanopy, understory, shrub, herbaceous) within the plot
Max. shrub height	height of tallest shrub, measured or estimated in meters
Tree height	height of tallied trees, measured with a clinometer or estimated from a nearby measured tree, and estimated for trees less than 80'
Total basal area	basal area (sq m/ha) of all stems tallied with a 20 basal area factor prism, multi-stem trees were counted as separate trees (Mueller-Dombois 1974)
Conifer basal area	basal area of conifers (see above)
Hardwood basal area	basal area of hardwoods (see above)
Snag basal area	basal area of snags (see above)
Sapling basal area	basal area of any live tree 10.0-12.4cm dbh (see above)
Young basal area	basal area of any live tree 12.5-27.4cm dbh (see above)
Medium basal area	basal area of any live stems 27.5-52.4cm dbh (see above)
Mature basal area	basal area of any live stems 52.5-89.9cm dbh (see above)
Large basal area	basal area of live stems >90cm dbh (see above)
Trees <10.1cm dbh	percent of ground covered by dominant tree species <10.1cm dbh, estimated using the line-intercept method (Mueller-Dombois 1974)
Shrub cover	percent of ground covered by shrub species
Herbaceous cover	percent of ground covered by herbaceous plant species
Duff cover	percent of ground covered by duff
Inorganic litter cover	percent of ground covered by inorganic material, such as rocks
Small dead and down dbh, at largest end	percent of ground covered by dead and down woody material >2.5 - <30cm
Large dead and cover	percent of ground covered by dead and down woody material >30cm dbh, at largest end

Nest site variables and methods (adapted from Seamans 1994, Call 1990, LaHaye 1988).

Variable	Method
Nest type	type of nest - broken top, cavity, or platform. For platform nests, observer postulated primary nest occupant
Nest tree species	species of tree which nest is located in
dbh	diameter at breast height of nest tree measured with a dbh tape or measuring tape
height	height of nest tree measured with a clinometer
Nest height	height of nest measured with a clinometer
Orientation	for platform nests, the orientation of the nest from the bole, measured in degrees
Distance to bole	for platform nests, the distance from the bole, measured in meters
Canopy cover	percent canopy cover directly over the nest, estimated visually from the ground
Number of shelter trees	number of trees with live branches directly over nest
species	species of shelter trees
dbh	diameter of breast height of shelter tree (see above)
height	height of shelter tree (see above)