

# Wildlife Species and Habitat Diversity on the Antrim Woodlot

Overall, the diversity of species and habitats on the Antrim woodlot would be considered slightly on the low side of average for a woodlot in central Nova Scotia. There are few stands with a high level of vertical layering or a wide range of plant species diversity present. Thus the number of habitat niches available to be occupied is low. A fairly high volume of standing dead wood (i.e. snags) is present, but exhibits low levels of use, and primarily old excavations by wildlife. Volumes of down and dead woody debris are quite low, which results in a lack of habitat for ground dwelling fungi, plants and animals.

Songbird observations are a useful relative indicator of the woodlot diversity. The songbird surveys conducted by Moira Campbell and Charles Graves identified a total of 43 different species. For comparative purposes, spring surveys within nearby locations are as follows: greater than or equal to 35 species in mature spruce-fir/ intolerant hardwood stands bordered with 5 to 10 year old clearcuts in MacPhee Comer, Hants County; and greater than 50 species in mature spruce-fir and tolerant hardwood stands along Rines Creek northwest of Shubenacadie, Hants County. Given the range of ages and species composition at Antrim, along with a large brook, one would predict higher songbird abundance and species diversity.

Usually, areas near a brook or other watercourse will contain a higher level of plant diversity than nearby upland areas. The higher moisture levels and organic soils aid plant growth, which in turn attracts a greater number of animals. However, on the Antrim Woodlot the riparian slopes of Far Brook are only slightly enriched relative to upland areas. Additional plant species along the brook, such as white ash and witch hazel, were not echoed by observations of animal tracks, pellets, songs, etc. which were different from upland sites.

There were very few feeding, and only old nest excavations by woodpeckers. Mature stands usually provide excellent feeding and nesting habitat for woodpeckers. There were old feeding holes of black-backed three-toed woodpeckers seen in stand 15. A pair of pileated woodpeckers flew over the trail between stands 6 and 8, and their recent feeding holes were observed in several locations in the northwestern stands. Between our survey, and the formal bird survey, five of the six woodpecker species commonly found in the province were observed on the woodlot. The yellow-bellied sapsucker was the only species not seen or heard, despite being fairly common, although it does tend to prefer hardwood stands. However, the abundance was low for all species, except the pileated woodpeckers, which have a nesting territory larger than the woodlot size. The presence of the pileated woodpeckers does indicate that sufficiently large diameter trees are present on the woodlot for all bird, and most mammalian cavity users.

Five additional bird species or their signs, were observed on the July survey, which were not seen or heard in June. These included the two woodpeckers referenced above; a pair of tree swallows in stand 21; a male winter wren singing in stand 6; and a broad-winged hawk on the Antrim road (which can be predicted to have a territory overlapping the woodlot).

The clear-cut area (stand 21) had a low level of vegetation diversity, primarily regenerating balsam fir, spruce, aspen and red maple trees with patches of exposed mineral soil, some blueberry and bristly sarsaparilla plants. A low abundance and diversity of herbaceous plants provides reduced habitat quality for birds feeding, brood cover and invertebrate populations. Hot, dry exposed soils minimize habitat suitability for amphibians, invertebrates and soil community fauna. The habitat and microhabitats within this stand should gradually improve over time, but could easily be enhanced with selective planting of fruit and nut bearing trees, shrubs or ground plants.

Stand 5, the spruce bog, had good softwood cover from sun or precipitation, low nutrients associated with the soil or plants, and a sparse fungal community. The dense thickets were suitable for snowshoe hare, the canopy layers adequate for red squirrels and songbirds.

Wet patches and springs in the northeast corner of the lot encouraged the presence and abundance of species associated with high moisture levels. A greater number of frogs (pickrel, wood) and salamanders (red-backed) were observed. Also, there was a visually prominent patch of standing and leaning softwoods with a diverse and abundant growth of fungi near the borders of stands 9, 6 and 8. (I suggest asking Marion Zinck from the NS Museum of Natural History to visit).

The richest stand was number 6, with a range of wildlife habitats and microhabitats. A mature tolerant hardwood/softwood mix typically is a diverse habitat preferred by many species. The wider variety of tree species was echoed at the shrub and ground vegetation layers. The slope and moisture gradient added to the habitat variability. The number of tracks observed in the muddy skid trail which bisects this stand reflected the higher level of wildlife activity. Sand tracking in this stand would be an easy survey and interpretive technique to implement.

To reiterate, the wildlife habitat diversity on the Antrim woodlot is low. However, there are many habitat management techniques available which could be readily applied if desired.

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