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Abstracts

FEATURE ARTICLES

BOREAL FOREST SONGBIRD COMMUNITIES OF THE LIARD VALLEY, NORTHWEST TERRITORIES, CANADA

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Abstract. Songbird communities in the boreal forest of the Liard Valley, Northwest Territories, Canada, are described after three years of study. Point count stations ($n = 195$) were placed in six types of forest (mature deciduous, coniferous, and mixedwood; young forests; wooded bogs; clearcuts) in a 700-km² area. Vegetation characteristics at each station were also measured. Eighty-five species of birds (59 passerine species) occurred in 11 647 detections. Mixedwood forests had the highest richness of songbirds (~41 species per 800 individuals) of the six forest types, and contained approximately 30% more individuals than nearly pure coniferous or deciduous forests. Species richness and relative abundance was 10–50% lower than in comparable forests farther south and east, and the difference was most pronounced in deciduous forests. Communities were dominated by a few species, especially Tennessee Warbler (*Vermivora peregrina*), Magnolia Warbler (*Dendroica magnolia*), Swainson's Thrush (*Catharus ustulatus*), Yellow-rumped Warbler (*Dendroica coronata*) and Chipping Sparrow (*Spizella passerina*). White-throated Sparrow (*Zonotrichia albicollis*), a dominant species in boreal forests farther south, was notably scarce in all forests except clearcuts. Clearcuts and wooded bogs had the simplest communities, but had unique species assemblages. Canonical correspondence analysis showed that the bird community was well correlated with vegetation structure. The primary gradient in upland forests was from deciduous to coniferous forests (also young to old, respectively). The secondary gradient was from structurally simple to complex forests. These results allow comparisons with other boreal areas to understand regional patterns and help describe the bird community for conservation purposes.

Key words: boreal forest, community, mixedwood, Northwest Territories, ordination, songbird, succession.