

Fauna & Forage

Species richness and nesting success of migrant birds in natural and anthropogenic woodlands in southeastern South Dakota

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ABSTRACT: Forest fragmentation is thought to be partially responsible for population declines in many Neotropical migrant songbirds due to the combined effects of higher rates of brood parasitism and increased predation at forest edges. A majority of the woodland habitat in the northern Great Plains is found in native riparian corridors, and this habitat has been much reduced from its historical extent, but additional woodland nesting habitat has been established within the last century in the form of human-planted farmstead woodlots. We compared abundance, species richness, and nesting success of migrant songbirds breeding in native riparian corridors and anthropogenic woodlots to assess the degree to which anthropogenic habitats could substitute for lost natural riparian woodlands. The two habitats had similar bird abundances but native riparian woodlands were more species-rich than woodlots. We located a total of 650 nests, with 320 nests of 15 species in woodlots and 331 nests of 25 species in corridors. Nesting success was not significantly different between the two habitats for all species combined or for individual species with at least 15 nests in each habitat. Nests situated above 5 m were more successful than lower nests, but distance to woodland edge did not influence nesting success. Nests initiated in the middle and late portions of the nesting season were more successful than early-season nests. Anthropogenic woodlots were as good as natural habitats for successful nesting. However, many of the Neotropical migrants occurring in riparian habitats were absent from woodlots, which suggests that riparian corridors are especially important habitats for breeding birds in the northern Great Plains.