

Avian Diversity at Various Stages of Tallgrass Prairie Restoration

Survival of grassland birds in North America has been threatened by significant reduction of prairie habitat. Neal Smith Wildlife Refuge in central Iowa is a large-scale prairie restoration and management site. Monitoring effects of habitat restoration on plant and animal communities helps conservationists better understand how to preserve sensitive species that depend on prairie ecosystems to survive. This study was part an effort to monitor avian diversity at Neal Smith Wildlife Refuge and was conducted from 2008 to 2009.

Neal Smith Wildlife Refuge
Photo Credit Fish and Wildlife Service Staff



Research Question

How does the length of time a restored prairie has been out of crop rotation affect grassland vegetation and bird communities?

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Results

- Woodland bird populations decreased as prairie restoration occurred and one grassland species, the Henslow's sparrow, increased over the 14 year study period.
- Horned Larks, Killdeer, and Vesper Sparrows were most common in recently restored prairies which had higher forb cover than grass.
- Common Yellowthroats and Dickcissels were most common in prairies established for two to three years. There was moderate cover of both forbs and grasses in these plots.
- Henslow's Sparrows were found in well established prairies that were more than six years old. These sites were dominated by grasses and had little forb cover.



Dickcissel

Henslow's Sparrow - Photo credit Jim Dinsmore



Management Implications

Managed prairie that includes habitat at various stages of restoration maximizes avian diversity.

Older, more established prairies should be maintained to attract prairie-specific bird species that are most at risk.

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