

## Project Highlight – SD State Wildlife Grant

**Project Type**      Habitat restoration

**Title**      Assessing the impacts of tree plantings on grasslands birds in South Dakota

**In a nutshell**      Tree plantings impact grassland birds by providing predator perches and habitat favorable to nest parasites and by fragmenting remaining grasslands into smaller pieces. The study's purpose was to evaluate whether grassland bird density is influenced by the presence of tree plantings by comparing bird densities at varying distances from tree plantings, by evaluating bird densities in grasslands with and without trees, and by evaluating changes in bird densities in areas before and after trees were removed.

### **Relevant Species of Greatest Conservation Need**

- Le Conte's sparrow (*Ammodramus leconteii*)

**Relevant Habitats**      grassland habitats of eastern South Dakota

**Cooperators**      University of Montana (Dr. David Naugle and graduate student Frank Quamen), U.S. Fish and Wildlife Service

### **Purpose:**

- compare bird density among transects placed at variable distances from tree plantings
- evaluate bird density in transects at sites with trees to those from grassland sites without trees (i.e., controls)
- assess changes in bird density at sites before and after trees are removed as part of an experimental manipulation

**Timeframe**      2005 - 2006

**Location**      eastern South Dakota counties of Deuel, Brookings, Hamlin, Kingsbury, Miner, Lake, Moody, McCook and Minnehaha

### **Summary or Important Findings**

- bobolinks, savannah sparrows, and sedge wrens nested in lower densities near tree plantings than in grasslands lacking trees
- bobolinks and savannah sparrows occupied areas where trees were removed one year following removal, although sedge wrens did not show such a clear response to tree removal
- clay-colored sparrows bred in higher densities near tree plantings than in grasslands lacking trees
- land managers wanting to manage for native grassland birds should remove remnant tree plantings from grassland sites and avoid establishing new plantings in

or near grasslands to reduce the amount of edge provided, which provides access to nest parasites, such as the brown-headed cowbird

**Best contact person**      Dr. David Naugle, University of Montana

**More Information**

Quamen, F. R. 2007. A landscape approach to grassland bird conservation in the prairie pothole region of the northern Great Plains. Ph.D. Dissertation, University of Montana, Missoula. 150 pp.