

Project Highlight – SD State Wildlife Grant

Project Type Research

Title Nesting success of grassland birds in fragmented and unfragmented landscapes of northcentral South Dakota

In a nutshell Grassland birds are declining at a faster rate than any other North American bird group. This study evaluated relationships between habitat size and grassland birds to provide recommendations on how grassland patch size and arrangements can best benefit grassland-dependent birds.

Relevant Species of Greatest Conservation Need

- Chestnut-collared longspur (*Calcarius ornatus*)

Relevant Habitats Native prairie, particularly sites used for pastureland

Cooperators South Dakota State University (Dr. Ken Higgins) and Dakota State University (Dr. Kristel Bakker)

Purpose

- To evaluate how grassland patch size and landscape composition are related to grassland bird nest density, nest success, nest predation and parasitism.
- To determine the most effective grassland patch size for bird conservation in eastern South Dakota.
- To document habitat requirements of Le Conte's and Henslow's sparrows, if they are encountered.

Location northcentral South Dakota

Timeframe July 2003 – December 2006

Summary or Important Findings

- Larger grassland patches were positively correlated with daily survival of chestnut-collared longspurs and dabbling ducks.
- Nest parasitism rates of savannah and grasshopper sparrow nests decreased in large grassland patches.
- Landscapes with more than 50% grassland habitat produced higher daily nest survival rates for western meadowlarks, savannah and grasshopper sparrows.
- Land managers should preserve large, intact areas of native prairie or smaller patches with a high percentage of remaining grassland.

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More Information:

Berman, G. M. 2007. Nesting success of grassland birds in fragmented and unfragmented landscapes of north central South Dakota. M.S. Thesis, South Dakota State University, Brookings, SD. 64 pp.