

Project Highlight – SD State Wildlife Grant

Project Type Species survey and research

Title Distribution and lek locations of Greater Prairie-Chickens and Sharp-tailed Grouse outside of their traditional range in South Dakota

In a nutshell South Dakota's prairie grouse are important game birds in the state, but their status depends on the quality and quantity of grasslands. As Conservation Reserve Program grassland acreage has changed, so has the distribution of these two species. This project's purpose was to locate, survey and characterize leks located in new areas, outside the traditional, primary range in the state.

Relevant Species of Greatest Conservation Need

- Greater Prairie-Chicken (*Tympanuchus cupido*)

Relevant Habitats Mixed-grass prairie

Cooperators South Dakota State University (Kent Jensen and Charles Dieter; graduate student Mandy Orth)

Purpose

- To identify and survey areas of eastern South Dakota where populations of Greater Prairie-Chickens and Sharp-tailed Grouse are suspected to reside, and document their distribution and numbers.
- To characterize the landscape attributes within 3000 m of identified display grounds (leks).
- To analyze landscape characteristics using Geographic Information System modeling to develop a predictive model to assist natural resource managers in identifying potential prairie-chicken and sharp-tailed grouse habitats.

Timeframe August 2009 – June 2012

Location eastern South Dakota

Summary or Important Findings

- Grouse survey routes were conducted in potential suitable habitats; 70 grouse leks were located.
- Landuse was characterized at lek locations and at randomly selected non-use points. Landuse was analyzed at 7 spatial scales.
- Significantly more grass and less cropland were found around lek points.
- Total grass and patches on the landscape were strong predictors of grouse lek presence at all spatial scales.

Best contact person Dr. Kent Jensen, SDSU

More Information

Orth, M. R. 2012. Distribution and landscape: Attributes of greater prairie-chickens and sharp-tailed grouse outside of their traditional range in South Dakota. M.S. Thesis, South Dakota State University, Brookings. 77 pp.