Project Highlight – SD State Wildlife Grant

Project Type Research

Title Does prairie dog colony size matter? Implications for the conservation of grassland biota in South Dakota

In a nutshell Much research has been conducted on prairie dogs, but questions remain. Among the unknowns: What colony size is needed to support burrowing owls and other species that depend on prairie dog colonies? This study examined these questions at the Bad River Ranches in central South Dakota.

Relevant Species of Greatest Conservation Need
- burrowing owl (*Athene cunicularia*)

Relevant Habitats prairie dog colonies

Cooperators Turner Endangered Species Fund (Mike Phillips and Kristy Bly) and University of Montana

Purpose
- compare burrowing owl abundance across a range of prairie dog colony sizes
- compare prairie dog density and productivity across a range of prairie dog colony sizes
- compare vegetation cover and composition across a range of prairie dog colony sizes as a measure of forage utility to prairie dogs and other herbivores
- develop a suite of competing models that compare the influence of covariates on burrowing owls, prairie dogs, and vegetation

Timeframe 2005 - 2007

Location central South Dakota (Bad River Ranches in Stanley and Jones counties)

Summary or Important Findings
- Burrowing owl nests increased with prairie dog colony size, but nest densities declined. This may reflect the importance of other variables within or near the colonies.
- Burrowing owls preferred small colonies and preferred nesting near colony perimeters.
- Owls fledged a mean of 5.0 fledglings per total nests.
- The study demonstrated the importance of maintaining many small- and medium-sized prairie dog colonies to maintain burrowing owls in this area.

Best contact person Kristy Bly, World Wildlife Fund

More Information

Bly, K.L.S. 2008. Influence of local and landscape characteristics of prairie dog colonies on burrowing owl nest ecology in South Dakota. M.S. Thesis, Montana State University, Bozeman.