

Conservation, Habitat Use, and Genetic Diversity of a Translocated Population of Greater Prairie-chickens in Iowa

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Goals and Objectives:

- Evaluate the genetic diversity of the existing small population of greater prairie-chickens in Iowa and examine the effects on genetic diversity of supplementing the current population with translocated birds.
 - Develop a habitat suitability model and examine habitat use for greater prairie-chickens in Iowa. We will use current satellite landcover data along with local scale habitat data to develop a habitat suitability model for greater prairie-chickens in Iowa.
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Progress:

Genetics: We collected 111 blood samples from translocated birds in 2014. Blood samples from 2012 and 2013 are being processed at the University of North Texas.

Lek Surveys: We conducted prairie-chicken lek surveys weekly for 6 weeks during the spring of 2014.

Habitat Surveys: For grasslands within 3km of active lek sites, we are continuing to conduct vegetation surveys that include measuring visual obstruction and determining vegetation composition. We will use this vegetation data to assess habitat use of prairie-chickens within 3km of the active lek sites.

Telemetry: We attached 12 ARGOS satellite/GPS transmitters to 10 female and 2 male prairie-chickens in Nebraska prior to transport. All of the birds with our transmitters were released in Iowa in April 2014. We are tracking location data with weekly downloads from the ARGOS satellite system for the 2014 birds as well as one remaining bird from 2013. We collected over 3,100 GPS locations in 20 Counties in Iowa and 18 Counties in Missouri from the 2013 marked birds. Prairie-chicken location data, along with land cover data from the U.S. Geological Survey National Land Cover Database, will be used as the basis for a landscape level habitat suitability model.

Future Plans:

We will continue habitat surveys of the areas around the 3 active leks for the remainder of the 2014 field season. We will continue monitoring the locations of the birds with transmitters via weekly downloads from the ARGOS Web System. We will continue work on both the local and landscape level habitat use models.