

IDAHO DEPARTMENT OF FISH AND GAME

Steven M. Huffaker, Director

Project W-160-R-31

Subproject 53

Completion Report



SAGE-GROUSE ECOLOGY

Study III: Greater Sage-grouse Response to Exploitation

July 1, 2003 to June 30, 2004

By:

T. P. Hemker, Wildlife Program Coordinator
M. Commons-Kemner, Wildlife Research Biologist
N. Burkepile, Graduate Student
K. P. Reese, Professor, University of Idaho

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**COMPLETION REPORT
STATEWIDE WILDLIFE RESEARCH**

STATE: Idaho **JOB TITLE:** Sage-Grouse Ecology
PROJECT: W-160-R-31
SUBPROJECT: 53 **STUDY NAME:** Greater Sage-grouse
STUDY: III Response to Exploitation
JOB: 1
PERIOD COVERED: July 1, 2003 to June 30, 2004

GREATER SAGE-GROUSE RESPONSE TO EXPLOITATION

Abstract

During the early to mid-1980s, sage-grouse seasons were liberalized in many areas. Idaho, Montana, Wyoming, and Colorado generally held seasons that were ≥ 30 days in length with bag limits of ≥ 3 birds per day. By 1996, following widespread population declines, seasons became more conservative and areas in both Colorado and Idaho were closed to sage-grouse hunting. Although some information is available on the response of sage-grouse to exploitation, there is little empirical evidence documenting the effect of hunting on sage-grouse populations. Here, we report initial efforts to document effects of different exploitation rates on changes in sage-grouse populations. Long-term data on radio-marked grouse suggest that adult females are more susceptible to hunting than adult males. These data indicated that outside of the hunting season, most sage-grouse die in spring and summer. Few deaths were recorded during winter. Most lek routes (79%) in south-central and southeastern Idaho used in this analysis indicated increasing populations from 1995 to 2001, ranging from 3-183%. Four routes (21%) decreased from 18-62%. Generally, populations in areas closed to hunting had greater increases than those open to hunting. However, many of these areas were affected by fire during the late 1990s, confounding efforts to document the effects of hunting. Moreover, one of the greatest population increases (104%) occurred in the Lemhi Valley, an area with a 23-day sage-grouse season. Because population data have been collected over a relatively short period, and fires and other factors may be impacting population growth, lek route trend differences among areas subject to different rates of exploitation should be viewed very cautiously. A publication reviewing the first six years of data has been completed.

Recommendations

1. Continue to analyze breeding population trends by harvest area.
2. Work with regions to improve data collection efforts.

Results

A publication reviewing the results of the first six years of this project is available. It is:

Connelly, J. W., K. P., Reese, E. O., Garton, and M. L. Commons-Kemner. 2003. Response of greater sage-grouse *Centrocercus urophasianus* populations to different levels of exploitation in Idaho. *Wildlife Biology* 9:335-340.

It is available on the web at: www.wildlifebiology.com/2003/connelly.html

Submitted by:

Tom Hemker

Wildlife Program Coordinator

Approved by:

IDAHO DEPARTMENT OF FISH AND GAME

Dale E. Toweill
Wildlife Program Coordinator
Federal Aid Coordinator

James W. Unsworth, Chief
Bureau of Wildlife

FEDERAL AID IN WILDLIFE RESTORATION

The Federal Aid in Wildlife Restoration Program consists of funds from a 10% to 11% manufacturer's excise tax collected from the sale of handguns, sporting rifles, shotguns, ammunition, and archery equipment. The Federal Aid program then allots the funds back to states through a formula based on each state's geographic area and the number of paid hunting license holders in the state. The Idaho Department of Fish and Game uses the funds to help restore, conserve, manage, and enhance wild birds and mammals for the public benefit. These funds are also used to educate hunters to develop the skills, knowledge, and attitudes necessary to be responsible, ethical hunters. Seventy-five percent of the funds for this project are from Federal Aid. The other 25% comes from license-generated funds.

