

## Columbian Sharp-tailed Grouse - *Tympanuchus phasianellus*

Abundance: Uncommon

Status: NSS4 (Bc)

NatureServe: G4T3 S1

Population Status: population size and distribution are restricted but extirpation is not imminent; population size and distribution are limited but potentially expanding north and east from the Little Snake River Valley into the North Platte River Valley. Little is known about the Jackson Hole population, but it appears to be expanding from a source population in eastern Idaho.

Limiting Factor: Habitat: limiting factor is moderate; species is limited to mainly a small area of extreme south-central Wyoming, which is an extension of the population to the south in Colorado; habitat is decreasing and being fragmented as the impacts of energy exploration and development add to existing range quality problems; other human activity associated with energy exploration and development adds to the impacts, which are moderate to severe depending on location

Comment: due primarily to changes in the matrix.

### Introduction

Local populations of Columbian Sharp-tailed Grouse (*Tympanuchus phasianellus columbianus*) occur from British Columbia south to Nevada and east to Colorado. Although the species was historically extirpated in Oregon, California, and Nevada, breeding populations were reestablished in NV and Or using wild stock translocated from Utah and Idaho. Columbian sharp-tailed grouse occupy two locations in Wyoming. One small population in the Jackson Hole area has reacquired a portion of its former range, from which it was extirpated in the 1940s. Presumably, this population (one small lek) is the result of range expansion from sharp-tails in Teton Valley, Idaho. The second population occupies the Little Snake River drainage in south-central Wyoming. As of 2008 there were 29 known leks in this small but robust population, which is a northward extension of a much larger population that inhabits northwest Colorado. The Wyoming Game and Fish Department classifies the Columbian sharp-tailed grouse as a Species of Special Concern with a Native Species Status of 3 (NSS3) because populations are restricted in numbers and distribution, and habitat is vulnerable. Energy development in the Baggs and Savery area may be impacting the population in the Little Snake River drainage. There is no ongoing significant loss of sharp-tailed grouse habitat in Jackson Hole since much of the potentially suitable habitat is protected within Grand Teton National Park and on the National Elk Refuge. However, bison and elk that occupy the National Elk Refuge in winter impact mountain shrubs, aspen, willow, and cottonwood riparian habitat due to heavy browsing and mechanical damage. Residential development is also expanding on East and West Gros Ventre Buttes, which appear to provide some potential habitat west of Jackson. Some of this private land is protected by conservation easements.

### Habitat

The Columbian Sharp-tailed Grouse inhabits mountain-foothills shrub communities of serviceberry, snowberry, chokecherry, and Gambel oak; sagebrush-grassland; and willow- riparian habitats. In Wyoming, it prefers mountain-foothills shrub and sagebrush-snowberry habitats in the transitional zone between sagebrush-grass and forested habitats. Leks are the hub of breeding activity and are typically located in areas with little slope and low, sparse vegetation, such as knolls, ridgetops, or benches that allow good visibility. Nests are located within 1 km (0.6 mi) of the lek in an area with relatively tall, dense residual cover from the previous year. Brood-rearing areas contain a mosaic of dense shrubs and grasses with rich forb and insect foods, usually in mountain-foothills shrub or sagebrush-snowberry habitats. During winter, the Columbian Sharp-tailed Grouse relies on riparian areas and other sites within 6.4 km (4 mi) of the breeding complex with deciduous trees and shrubs for feeding, roosting, and escape cover. Columbian Sharptail Grouse also use dense agronomic grasslands and old haymeadows and populations have responded to CRP set aside acres in former agricultural lands in Colorado and Idaho.

### Problems

- h Species is susceptible to impacts from energy development and other large-scale projects that destroy or impair suitable habitats.
- h Species may be susceptible to impacts caused by climate change.
- h Loss of habitat enrolled in the CRP program may adversely impact this species in portions of its range.

## Conservation Actions

- h Conserve grassland habitats by minimizing the conversion of native prairie to croplands, fragmentation, roads, urban development, exotic plants, and a shift in community ecology characteristics.
- h Avoid or minimize pesticide use in habitats where this species nests to ensure a food source is maintained. If possible, all pesticide use should be postponed until this species has completed its breeding cycle.
- h In areas where this species nests, conduct prescribed burns in the fall to avoid loss of nesting cover. Burns should be relatively small so a portion of the area contains nesting cover at all times and adequate residual cover for nesting is retained for the following spring.
- h Manage nesting areas to minimize conflicts with natural resources extraction, wind power development, and recreational activities during the breeding season.
- h Manage nesting areas to minimize disturbance (including haying, burning, and moderate to heavy grazing) during the breeding season.
- h Through the Department's consultation role, continue working with other state and federal agencies responsible for land management decisions and project permitting to minimize conflicts in important habitat.

## Monitoring/Research

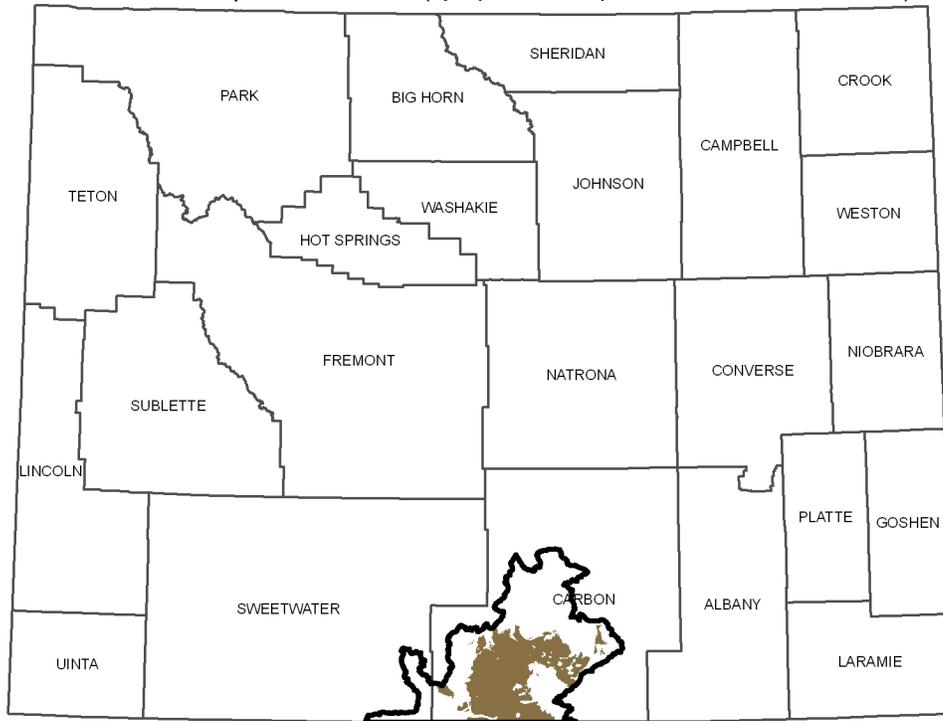
The Baggs district biologist for the Wyoming Game and Fish Department conducts lek counts annually. Results are entered in a database and leks are plotted on maps maintained by the district biologist. Lek locations and status are also entered in the Department's Decision Support System (DSS).

## Recent Developments

Recent genetics studies suggest the Colorado population is genetically more similar to Plains Sharp-tailed Grouse (*T.P. jamesi* subspecies) than it is to birds from the core of the Columbian Sharp-tail range in Idaho or British Columbia (Wood et al 2010). This work raises questions about which subspecies to lump the Colorado population and the population in the Little Snake River Valley in Wyoming. The Columbian Sharp-tailed Grouse was petitioned for listing under the Endangered Species Act (ESA) in 1995 and 2004 but the U.S. Fish and Wildlife Service found that it did not warrant listing. However if the genetics work by Wood et al (2010) holds up with additional genetics testing, the occupied range of Columbian Sharp-tailed Grouse and population size will shrink substantially and this may alter the status of the subspecies in the United States. This issue will likely instigate another petition to list under ESA. And then there is the issue of the potentially distinct population segment in northwest Colorado and South Central Wyoming. The implications for management and conservation are unknown at this time.

## References

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- Giesen KM, Connelly JW. 1993. Guidelines for management of Columbian Sharp-tailed Grouse habitats. *Wildl Soc Bull* 21(3):325-333.
- Leukering T, Carter MF, Panjabi A, Faulkner D, Levad R. 2003. Monitoring Wyoming's birds: the plan for count-based monitoring. In: Nicholoff SH, compiler. Wyoming bird conservation plan. Version 2.0. Wyoming Partners In Flight. Lander: Wyoming Game and Fish Department. p 575-601. Online: [www.blm.gov/wildlife/plan/WY/menu.htm](http://www.blm.gov/wildlife/plan/WY/menu.htm).
- Nicholoff SH, compiler. 2003. Wyoming bird conservation plan Version 2.0. Wyoming Partners In Flight. Lander: Wyoming Game and Fish Department. 668 p. Online: [www.blm.gov/wildlife/plan/WY/menu.htm](http://www.blm.gov/wildlife/plan/WY/menu.htm).
- Utah Division of Wildlife Resources. 2002. Strategic management plan for Columbian Sharptailed Grouse. Publication 02-19. State of Utah, Department of Natural Resources, Division of Wildlife Resources. 39 p. Online: <http://www.wildlife.utah.gov/uplandgame/pdf/02sharptail.pdf>.

Columbian Sharp-tailed Grouse (*Tympanuchus phasianellus columbianus*)

SOURCE: Digital maps of ranges and predicted distributions for Wyoming Species of Greatest Conservation Need: April 2010. Wyoming Natural Diversity Database. University of Wyoming, Laramie, Wyoming. Note that brown indicates the predicted distribution of the species; heavy black lines indicate outermost boundaries of possible occurrence.