

Columbian Sharp-tailed Grouse (*Tympanuchus phasianellus columbianus*)**Species Status Statement.**Distribution

Columbian sharp-tailed grouse (hereafter CSTG) is endemic to big sagebrush (*Artemisia tridentata*), shrub-steppe, wheatgrass-fescue (*Pseudoroegneria-Festuca*), pinegrass (*Calamagrostis rubescens*), mountain shrub, and riparian shrub plant communities in western North America (Giesen and Connelly 1993, Hoffman et al. 2015). Historically, this grouse species was spread across the western United States and Canada. Currently, it is patchily distributed across Idaho, Washington, Wyoming, Montana, Utah, Colorado, and British Columbia (IDFG 2015). In Utah, CSTG is now limited to the northern-most counties in Utah.

Table 1. Utah counties currently occupied by this species (eBird and Utah NHP)

Columbian Sharp-tailed Grouse
BOX ELDER
CACHE
DAVIS
MORGAN
RICH
WEBER

Abundance and Trends

This species experienced range-wide declines in occupied habitat and populations over the last century. CSTG now occupies less than 10% of its historic range, and 95% of the remaining individuals live in three populations in British Columbia, Colorado/Wyoming and Idaho/Utah (Hoffman et al 2015). The species disappeared from Oregon, California, and Nevada between 1920 and 1970. In the states where CSTG remain, including Utah, Montana, Washington, and Wyoming, they only occupy a small fraction of their historic range (Hoffman 2015).

In Utah this species occupies just four percent of its former range (Bart 2000). Lek count trends indicate continued declines of total number and birds per lek (Utah Division of Wildlife Resources Unpublished Data). Recent surveys suggest that portions of CSTG range in northern Utah have increased since 1987, primarily due to expansions in CSTG habitat. However, populations in Weber and Morgan counties have continued to decline due to human expansion (USFWS 2004).

Statement of Habitat Needs and Threats to the Species.

Habitat Needs

Columbian sharp-tailed grouse require a suite of seasonal habitats and considerable space – they will not persist on small, isolated tracts of habitat (Bergerud 1988). Managers classify habitats into three seasons: breeding, nesting, and fall/winter habitats.

- Lek sites tend to be open areas in otherwise suitable nesting habitat (Hoffman et al. 2015).
- CSTG nest in a variety of habitats including grasslands, alfalfa fields, seeded range lands, Conservation Reserve Program (CRP) fields, mountain shrub and sagebrush communities. Nesting site shrub cover can range from 0 to 40%, but nest sites consistently have high cover relative to the surrounding area. Brood habitats are generally similar to nesting habitats and have an abundance of forbs and grasses, with high interspersion of cover types (Hoffman et al. 2015).
- When available, CSTG select fall habitats with a high proportion of insects and agricultural crops (Jones 1966). In winter months CSTG move to mountain shrub or riparian areas with deciduous shrubs and trees that remain above the snow, including fruiting trees like chokecherries, serviceberries, and hawthorn (Giesen and Connelly 1993).

Threats to the Species

Historically, hunting within Utah likely contributed to large declines across the state (USFWS 2004). Today, the primary threats to this species are habitat degradation, conversion, and fragmentation. Conversion of native plant communities to cropland, and inappropriate grazing by domestic livestock, may alter habitat composition and nesting cover for CSTG. Use of herbicides to control shrubs may kill or limit fruiting in important winter shrub species that CSTG rely on for winter food (Giesen and Connelly 1993). Alteration of natural fire regimes may encourage plants of limited nutritional value to grow in place of preferred species. Invasion of exotic plants and human encroachment may alter habitats beyond what CSTG will use for lekking and nesting (Hoffman et al. 2015). Increased climate volatility may impact CSTG, either through prolonged drought or increased rainfall. Climate change and increased climate volatility may also increase juniper invasion and lead to habitat degradation (USFWS 2004).

Table 2. Summary of a Utah threat assessment and prioritization completed in 2014. This assessment applies to the species' entire distribution within Utah. For species that also occur elsewhere, this assessment applies only to the portion of their distribution within Utah. The full threat assessment provides more information including lower-ranked threats, crucial data gaps, methods, and definitions (UDWR 2015; Salafsky et al. 2008).

Columbian Sharp-tailed Grouse
High
Annual and Perennial Non-timber Crops
Brush Eradication / Vegetation Treatments
Inappropriate Fire Frequency and Intensity
Invasive Plant Species – Non-native
Medium
Disease – Endemic Organisms
Droughts
Housing and Urban Areas
Problematic Animal Species – Native

Rationale for Designation.

Long-term declining trends in CSTG abundance, and ongoing threats to its habitat, merit its designation as a Sensitive Species. CSTG have been the subject of multiple Endangered Species Act listing petitions. Findings in 2000 and 2006 concluded that larger metapopulations were not at risk of extinction, and therefore not warranted for listing (USFWS 2000, USFWS 2006). However, the species is still declining, and does not appear to be stable within Utah (USFWS 2004).

Economic Impacts of Sensitive Species Designation.

Sensitive species designation is intended to facilitate management of this species, which is recommended to prevent ESA listing and lessen related economic impacts. An ESA listing of Columbian sharp-tailed grouse would affect the management and development of agricultural areas in Utah's northern counties. There would also be increased costs of regulatory compliance for many land-use decisions and mitigation costs.

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