

# Sooty Grouse and Dusky Grouse (“Blue” Grouse)

*Dendragapus fuliginosus* and *D. obscurus*

## Conservation Profile



Sooty Grouse. Photo by Larry Neel

<b>Priority Status</b>	Conservation Target
<b>Reasons for Priority Status</b>	Declines Threats
<b>Other Rankings</b>	Continental PIF: Sooty Grouse – Watch List; Dusky Grouse - None Audubon Watchlist: Sooty Grouse – yellow; Dusky Grouse - None Natural Heritage: S3 (“Blue” Grouse) USFWS: None BLM: None NDOW: Conservation Priority (“Blue” Grouse); “High” concern in Upland Game Management Plan (“Blue” Grouse)
<b>Trends</b>	Historical: Probably declined in Nevada over past century (Alcorn 1988) Recent: Declined 50% since 1960’s; probably still decreasing in West; unknown trend in Nevada [i1, p3]
<b>Population Size Estimates</b>	Nevada: 1,700 (“Blue” Grouse) [p5] Global: 2,600,000 [p5] Percent of Global: < 1 %
<b>Population Objective</b>	TBD
<b>Monitoring Coverage</b>	Not systematically monitored
<b>Key Conservation Areas</b>	TBD

## Habitat Use Profile

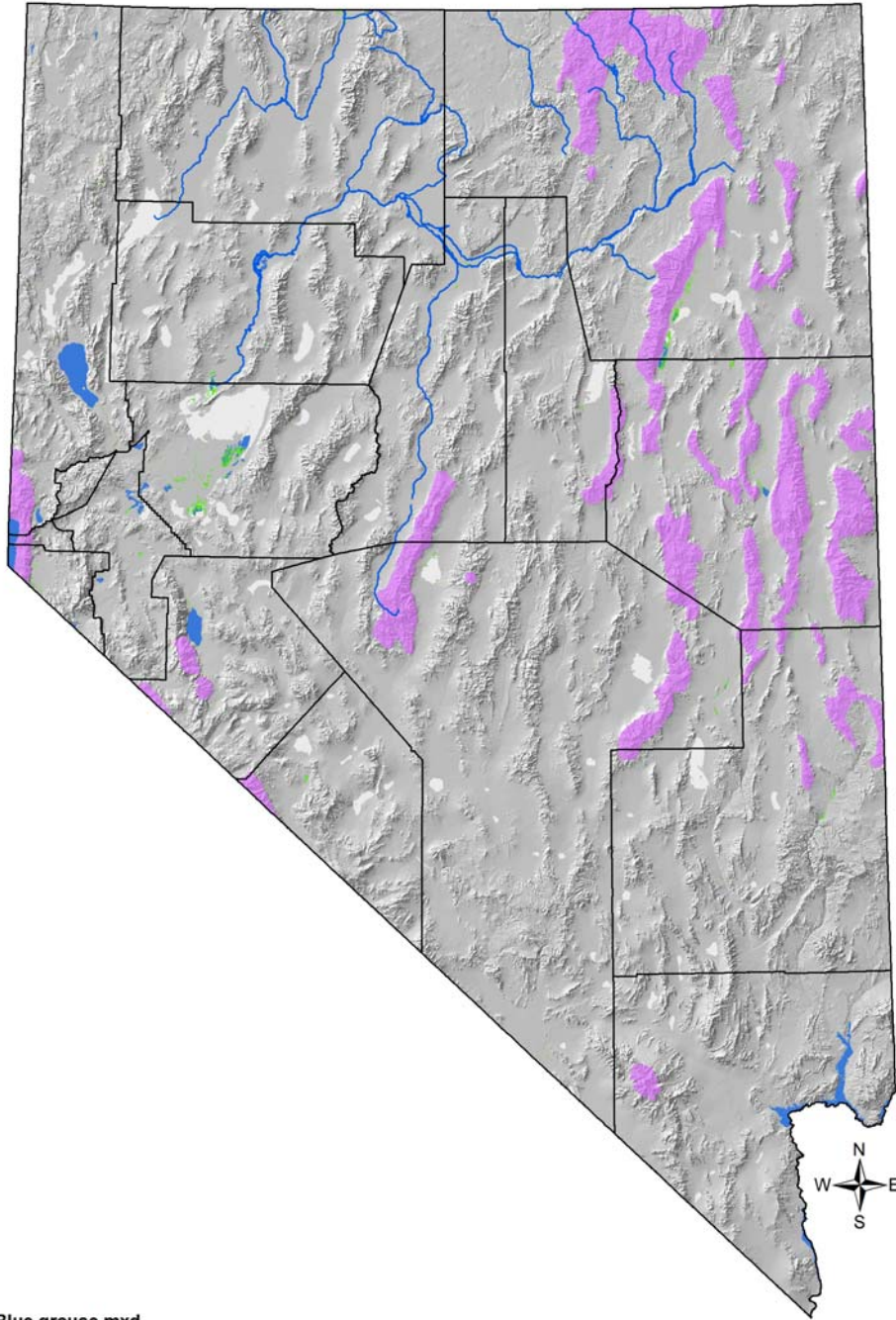
<b>Main Habitats Used in Nevada</b>	Coniferous Forest Aspen Sagebrush
<b>Key Habitat Use Parameters</b>	In Nevada, usually found in mixed conifer forests (or Mt. Mahogany) with interspersed aspen stands Requires well-developed shrub/herbaceous understory, prefer 30 – 60% shrub cover [EO] Common shrub species in occupied habitat include currants, serviceberry, rose [EO] Migrates to higher elevations post-breeding into dense conifers (1-10 km) [p1] Requires nearby water, usually 10 – 800 m from nest [p1]
<b>Minimum Patch Size</b>	Home range 0.2 – 8.5 ha for breeding, 12-16 ha for broods, 1.6 -42 ha winter [p1]

## Natural History Profile

<b>Seasonal Presence in Nevada</b>	Year-round
<b>Known Breeding Dates in Nevada</b>	Mid-April – July [p3, EO]
<b>Nesting Habits</b>	Nests on ground with ample overhead cover [p1] High fidelity to breeding territories [p1]
<b>Food Requirements</b>	Feed on ground or within forest understory [p1] Consume invertebrates, leaves, flowers of forbs, fruit-bearing shrubs; requires conifer needles in winter [p1]

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File: Blue grouse.mxd

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## Temporary Map Key

Pink: Breeding range

Hot pink / magenta: For some birds, breeding data was limited, and was supplemented by extrapolation to include likely breeding range. In these cases, hot pink represents known breeding range, and lighter pink the extrapolated breeding range.

Blue: Winter range

Yellow: Important migration stopover areas

Purple: Year-round range

Green: In some maps, wetlands mapped by SWReGAP are shown in green for interpretational purposes

Dot symbols: In cases where breeding records were isolated or very restricted in extent, they are represented by a pink dot symbol rather than a shaded area.

Arrows: Major migration routes. These are shown only for birds for which there are migration-associated conservation issues.

## OVERVIEW

The Dusky and Sooty Grouse were, until 2007, regarded as a single species, the “Blue” Grouse. They are treated together here because most of the available information does not distinguish between the two species. In Nevada, the Sooty Grouse occurs in the Carson Range, and the Dusky Grouse occurs in all occupied locations to the east of the Carson Range, with the possible exception of Esmeralda and Mineral counties, where sightings of “Blue” Grouse have not yet been ascribed to either species. Dusky Grouse populations in Nevada are patchy and isolated, and disconnected from larger population centers to east and north. “Blue” Grouse are montane birds, and in Nevada they appear to require the availability of both Aspen or Montane Riparian woodlands, where riparian shrubs and insect communities provide the bulk of spring summer food sources, and Coniferous Forest, which provides critical winter forage [p1]. Dusky Grouse may also range out into adjoining sagebrush habitat with some frequency. Better distinguishing between the habitat needs and conservation issues for these two grouse, which may still be declining in Nevada, is the most immediate need.

## ABUNDANCE AND OCCUPANCY BY HABITAT

- TBD

## NEVADA-SPECIFIC STUDIES AND ANALYSES

- None [?, TBD]

## MAIN THREATS AND CHALLENGES

- Little information exists about threats to Dusky or Sooty Grouse. However, it is likely that generalized threats to Aspen, Montane Riparian, and Coniferous Forest habitats affect both species negatively. These include:

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- Heavy and/or sustained livestock grazing in Aspen habitat
- Conifer encroachment into Aspen habitat
- Habitat-destroying fires (although lower-intensity or mosaic fires that restore forest vigor may be beneficial)

### CONSERVATION STRATEGIES

#### **Proscribed Strategies**

- The Dusky and Sooty Grouse are managed as upland game birds by the Nevada Department of Wildlife. Conservation strategies have been recently identified in NDOW’s Upland Game Management Plan (NDOW [\_\_\_]). Key components of those strategies are:
  - Develop an effective survey protocol to better determine the distribution of Dusky and Sooty Grouse in Nevada
  - Develop a refined distribution map for both grouse species
  - Improve data gathering from hunter-harvested “Blue” Grouse
  - Conduct monitoring for presence and possible impacts of West Nile virus
  - Conduct additional research to better distinguish between traits of Dusky and Sooty Grouse
  - Facilitate the protection, enhancement, or restoration of at least 5,000 acres of suitable Blue Grouse habitat (i.e. landscapes with interspersed Coniferous Forest and Aspen woodland with healthy understory, exhibiting a range of successional stages)
  - Monitor “Blue” Grouse populations to determine effectiveness of any implemented habitat restoration or improvement projects

#### **Habitat Strategies**

- General Aspen, Montane Riparian, and Coniferous Forest conservation strategies, with focus on maintaining mixed-age conifer forests

### OTHER PRIORITY SPECIES WITH SIMILAR CONSERVATION STRATEGIES

- Mountain Quail

### FURTHER READING

- TBD

#### Temporary codes for standard references

[p1] Birds of N. America account for this species

[p2] NV Bird Conservation Plan ver. 1 (Neel 1999)

[p3] NV Wildlife Action Plan

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[p4] Nevada Breeding Bird Atlas

[p5] PIF N. American Landbird Conservation Plan (Rich et al 2004) (NOTE:

[p6] Intermountain West Regional Shorebird Plan (Oring et al 2003)

[p7] Pacific Flyway reports

[p8] Shrubsteppe Landscapes in Jeopardy (Dobkin and Sauder 2004)

[p9] Birds in a Sagebrush Sea (Paige and Ritter 1999)

[s1] NBC-based population size estimates

[s2, s3] NBC-based habitat relationship analysis

[s4] Breeding Bird Atlas breeding phenology data

[i1] BBS trends analysis (Sauer et al 2005)

[i2] NV Upland Game Management Plan (Espinosa et al in prep.)

[i3] Western Quail Management Plan (Zornes et al 2008)

[i4] NDOW Shorebird and Waterbird monitoring data (Neel)

[i5] Brad Andres IMJV Shorebird / Waterbird data set

[i6] GBBO Technical Report 08-01 (2008)

[EO] Expert opinion from NVPIF group members

[IWWCP] Intermountain West Waterbird Conservation Plan

[NAWCP] North American Waterbird Conservation Plan

[LBCUSACP] Long-billed Curlew Status Assessment and Conservation Plan

[USSCP] U.S. Shorebird Conservation Plan

[WHSRN] Western Hemispheric Shorebird Regional Network