Sage Thrasher

Oreoscoptes montanus

Photo by Martin Meyers

Habitat Use Profile

Habitats Used in Nevada	
Sagebrush Montane Shrubland Salt Desert Scrub	
Key Habitat Parameters ●	
Plant Composition	Sagebrush, greasewood, various salt desert or montane shrub species; avoids cheatgrass[8, EO]
Plant Density & Height	Shrub cover 11 – 44%,[9] average height 30 – 90 cm (1 – 3 ft), but can be taller; sparse to moderate ground cover[8, EO]
Mosaic	High-quality shrubland with spatial variability in density and height and structural complexity; patches of bare ground are acceptable [8]
Distance to Water	May prefer nearby water[2]
Response to Vegetation Removal	Negative to reducing shrub cover below 10%; exotic weed control encouraged[8, EO]
Area Requirements ◑	
Minimum Patch Size	Unknown, but thought to avoid small patches
Recommended Patch Size	> 100 ha [250 ac] [EO]
Territory Size	0.64 – 1.9 ha [1.6 – 4.7 ac][8]

Conservation Profile

Priority Status	
Stewardship Species	
Species Concerns	
High stewardship responsibility Habitat threats	
Other Rankings	
Continental PIF	Stewardship Species
Audubon Watchlist	None
NV Natural Heritage	S5B
USFWS	Bird of Conservation Concern, Migratory Bird
BLM	None
USFS	None
NDOW	Stewardship
Trends	
Historical ○	Unknown
Recent ◑	Stable, or slight declines[11]
Population Size Estimates	
Nevada (NBC) ◑	1,500,000
Global ◑	7,900,000 [10]
Percent of Global	~ 20%
Population Objective	
Maintain[10, EO]	
Monitoring Coverage	
Source	Nevada Bird Count
Coverage in NV	Good
Key Conservation Areas	
Protection	High-quality Great Basin sagebrush and montane shrubland
Restoration	Degraded / burned Great Basin sagebrush and montane shrubland

Natural History Profile

Seasonal Presence in Nevada	
Spring – Summer	
Known Breeding Dates in Nevada	
April – late August[1]	
Nest and Nesting Habits	
Nest Placement	On ground or low branch of dense shrub > 70 cm [27 in] tall; sometimes with roof[8, 9]
Site Fidelity	Moderate for breeding territory[8]
Food Habits	
Basic	Ground forager
Primary Diet	Medium-sized terrestrial insects, such as crickets[8]
Secondary Diet	Berries and seeds in non-breeding season[8]

Confidence in Available Data: ●High ◑Moderate ○ Low

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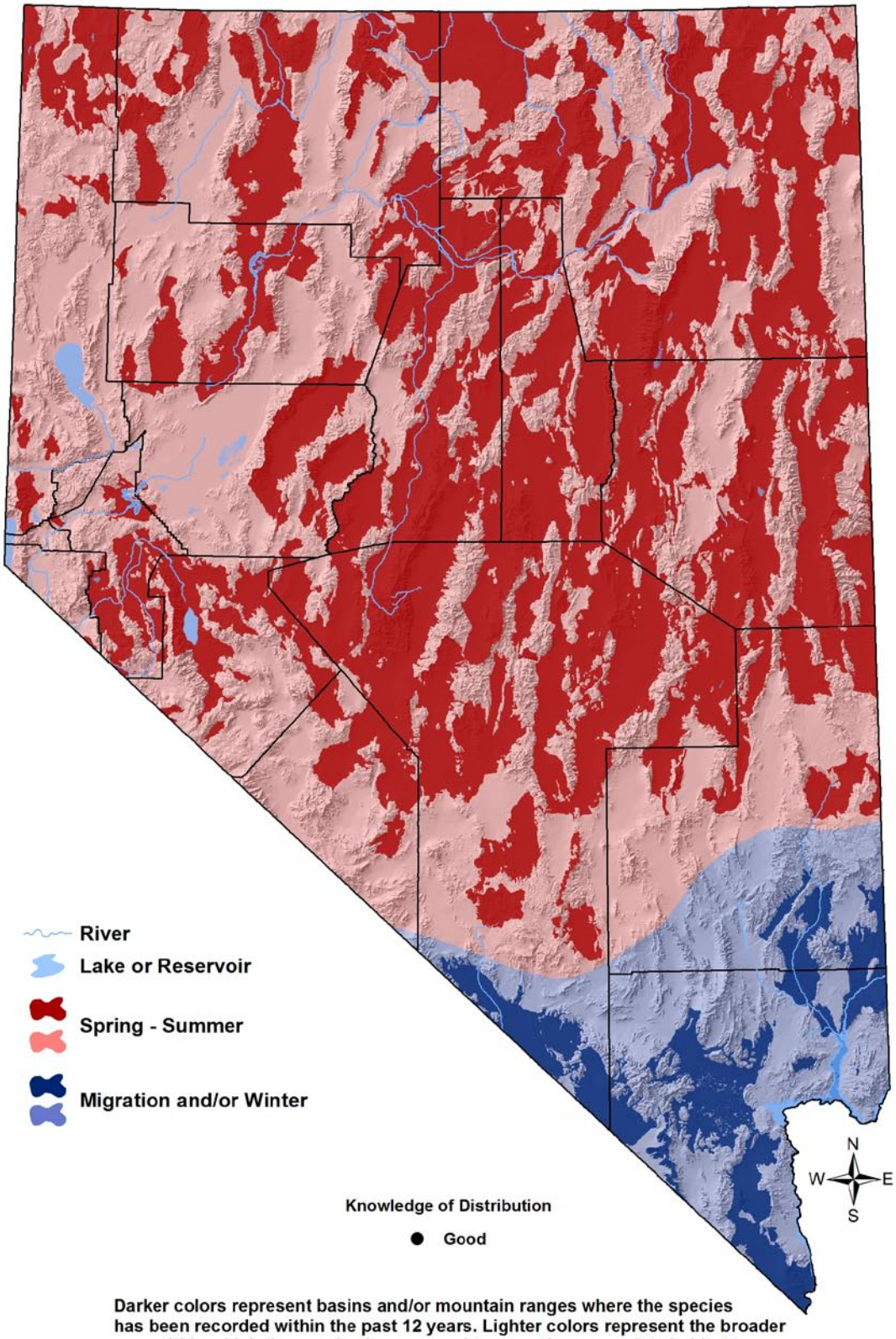

Darker colors represent basins and/or mountain ranges where the species has been recorded within the past 12 years. Lighter colors represent the broader area within which the species is presumed to occur in appropriate habitat types.

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Overview

Nevada provides a home for about one-fifth of the global population of Sage Thrashers. They primarily inhabitat sagebrush valleys, but can also be found breeding in salt desert (especially where it intergrades with sagebrush or where greasewood predominates) and montane shrubland.[2, 3, 6] For reasons that are unclear, Sage Thrashers are not declining to the same degree as several other sagebrush-associated songbirds, including Brewer's Sparrow (p. Spp-73-1).[8] Still, Breeding Bird Survey results indicate possible declines in Nevada dating from approximately 1980.[11]

Sage Thrashers are consistently more numerous in areas with greater cover of high-quality sagebrush,[5,8] and they are often positively associated with greater shrub height[4] and vertical complexity.[13] They avoid areas with junipers, even if they are present in low densities.[6] On a landscape scale, Sage Thrashers are more likely to occur where uninterrupted sagebrush cover is present over large spatial expanses.[5] Any treatment that decreases or fragments sagebrush cover is likely to be detrimental,[4, 12] and indeed, Sage Thrashers were shown to be negatively affected by fire in two studies involving sagebrush cover in a montane setting.[3, 6] However, at least one study in eastern Washington found Sage Thrashers to be relatively insensitive to patch size, although fragmentation of habitat by agriculture appears to reduce reproductive success.[12] Although primarily associated with the Great Basin region of Nevada, the Sage Thrasher's breeding range extends southward into the northern Mojave region in the areas where sagebrush habitat is present. Effective conservation and management of healthy sagebrush landscapes in Nevada (see p. Hab-17-1) is the key factor for ensuring the stability of the Sage Thrasher.

Abundance and Occupancy by Habitat

Birds / 40 ha on NBC Transects in the Great Basin and Mojave Regions

Primary Habitat at Transect	Transects Occupied	Birds/40 ha (95% C.I.)
Great Basin		
Sagebrush	76% (25/33)	4.6 (3.1 – 6.1)
Salt Desert	83% (19/23)	3.9 (2.8 – 5.0)
Montane Shrubland	40% (8/20)	5.5 (2.9 – 8.1)
Mojave		
Sagebrush	77% (20/26)	5.8 (4.0 – 7.6)

- Other data for the Great Basin indicate that density rarely exceeds 12 birds / 40 ha [0.12 / ac] even in high-quality local sites[7]

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Nevada-Specific Studies and Analyses

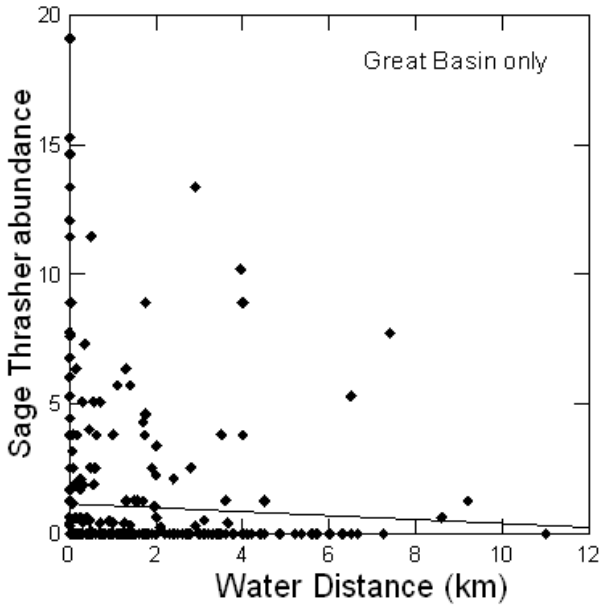
Habitat Requirements (NBC data)

The multivariate analysis (*Appendix 3*) summarized in the table below was based on ground-collected microhabitat measurements taken on NBC transects where Sage Thrashers were present. Sage Thrasher abundance was significantly associated with higher shrub density and lack of trees. There was no significant association with herbaceous cover, and only a weak association with shrub height (variables not shown).

Vegetation parameter	Multivariate p-value and sign
Shrub Cover %	<0.001 (+)
Herbaceous Cover %	0.175 (-)
Tree Density (#/ha)	0.001 (-)
Area under ROC curve	**0.797**

Landscape Associations (NBC data)

Both linear and logistic analyses (*Appendix 3*) confirmed that sagebrush cover was preferred, and that use of Salt Desert and Montane Shrubland habitats was at least partly dependent on the presence of juxtaposed or interspersed sagebrush. Sage Thrashers appeared to be more common closer to water (as shown in the figure below). However, this relationship was not statistically definitive, and could have been a function of some unmeasured covariate, such as elevation.



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Main Threats and Challenges

Habitat Threats

Loss, degradation, or fragmentation of high-quality sagebrush shrubland due to:

- Fire
- Invasive plants, especially cheatgrass
- Expansion of pinyon-juniper woodland into sagebrush
- Heavy livestock grazing
- Heavy OHV use

Research, Planning, and Monitoring Challenges

- Further research is needed to determine the best management strategies for the pinyon-juniper / sagebrush interface zone for multi-species benefits
- Although short-term fire management strategies are established, further research and planning is needed to clarify the most beneficial longer-term fire management strategies that protect important habitat while promoting its long-term viability
- Further study is needed to determine the Sage Thrasher's patch size requirements, and to better quantify its sensitivity to patch size

Sage Thrasher habitat in central Nevada. Photo by John Boone.

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Conservation Strategies

Habitat Strategies

- Sagebrush (p. Hab-17-1), Montane Shrubland (p. Hab14-1), and Salt Dessert Scrub (p. Hab-18-1) habitat conservation strategies benefit this species
- Protect large expanses of high-quality sagebrush (see below) from fire to the extent possible
- Within large expanses of high-quality sagebrush with few invasive plants, attempt to channel activities that can promote establishment or maintenance of cheatgrass, including heavy livestock grazing and heavy OHV use, to areas that are already degraded
- Where pinyon-juniper encroachment is known to have recently occurred within high-quality sagebrush habitat, conduct pinyon-juniper removal projects. However, we recommend that pinyon-juniper management projects consider the importance of maintaining a natural, interspersed interface zone between sagebrush shrublands and pinyon-juniper woodlands, as discussed in the Pinyon-Juniper (p. Hab-16-1) habitat conservation plan

Research, Planning, and Monitoring Strategies

- Identify and map large patches of intact, mature sagebrush (especially Wyoming big sagebrush) that contain dense shrubs and little cheatgrass
- Develop a fire management strategy that ensures that high-quality sagebrush habitat receives priority fire suppression efforts in the immediate future. Additionally, develop fire management strategies that balance the need for short-term habitat protection with long-term habitat viability
- Conduct additional research to determine how to pinyon-juniper management projects can both benefit Sage Thrashers as well as the suite of birds that use the pinyon-juniper / sagebrush interface zone (see p. Hab-16-1)
- Continue monitoring to better determine population trends and the extent to which breeding activity occurs the Mojave region of Nevada

Public Outreach Strategies

- None identified

References: [1]GBBO unpublished Atlas data; [2]GBBO unpublished NBC data; [3]Holmes (2007); [4]Kerley and Anderson (1995); [5]Knick and Rotenberry (1995); [6]Noson et al. (2006); [7]Paige and Ritter (1999); [8]Reynolds et al. (1999); [9]Rich (1980); [10]Rich et al. (2004); [11]Sauer et al. (2008); [12]Vander Haegan (2007); [13]Wiens and Rotenberry (1981); [EO] Expert opinion