

Black-chinned Sparrow

Spizella atrogularis



Photo by Martin Meyers

Habitat Use Profile

Habitats Used in Nevada	
Pinyon-Juniper Montane Shrubland Joshua Tree	
Key Habitat Parameters •	
Plant Composition	Pinyon pine, juniper, ponderosa pine, manzanita, yucca, sagebrush, and variety of other xeric shrubs; ⁸ high shrub diversity probably preferred ^{EO}
Plant Density	Open tree canopy (closed-canopy stands avoided), dense shrub canopy at 1-2 m [3 – 7 ft] height ⁸
Mosaic	Mature, open woodland interspersed with open patches containing dense shrubs ^{2, 8}
Aspect	South-facing slopes probably preferred ⁸
Response to Vegetation Removal	Negative ^{EO}
Area Requirements ○	
Minimum Patch Size	Unknown; estimated at 20 ha [50 ac] ^{EO}
Recommended Patch Size	> 100 ha [250 ac] ^{EO}
Territory Size	1.6 - 4 ha [4 - 10 ac] ⁸

Conservation Profile

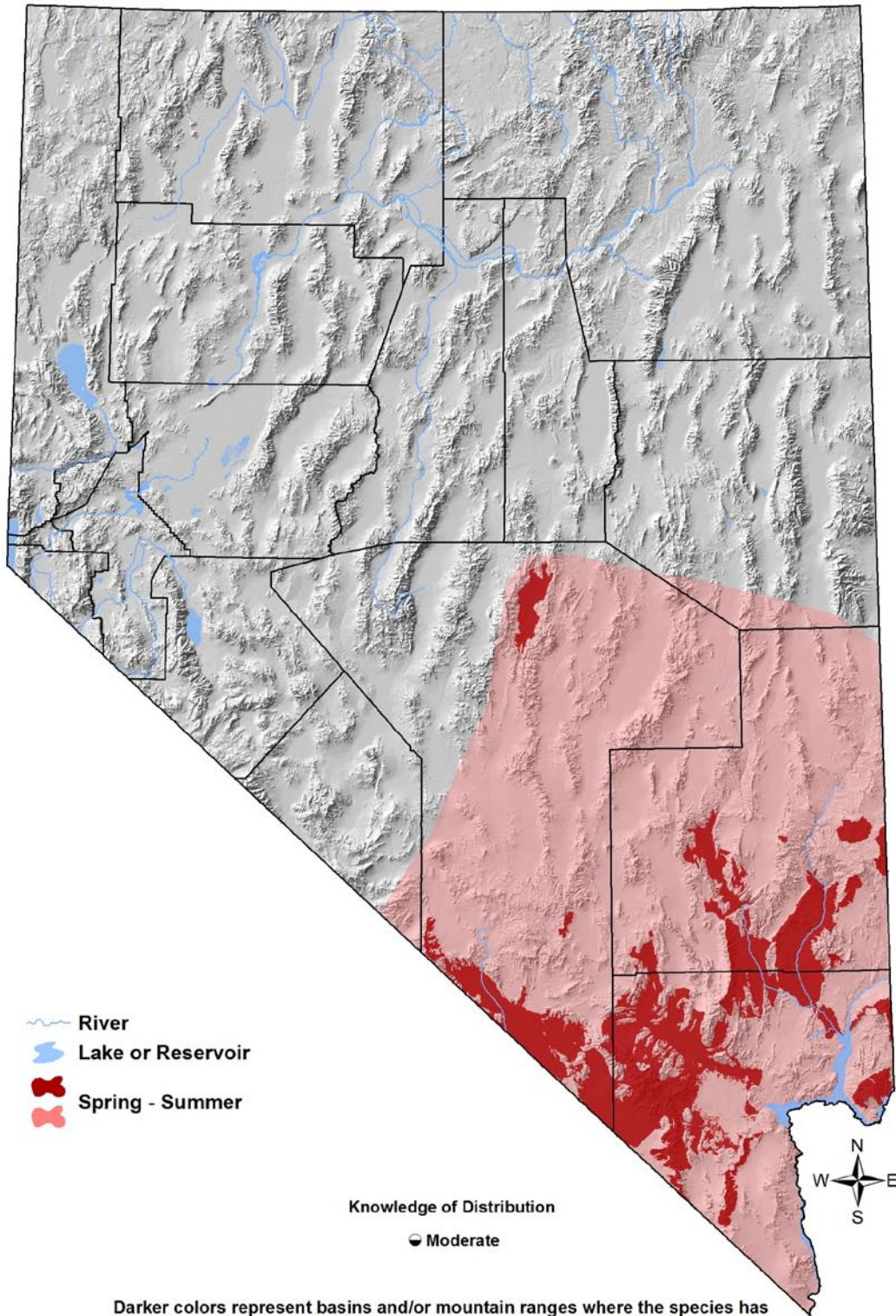
Priority Status	
Conservation Priority Species	
Species Concerns	
Probable Recent Declines Habitat threats	
Other Rankings	
Continental PIF	Watch List
Audubon Watchlist	Red
NV Natural Heritage	S3B
USFWS	Bird of Conservation Concern, Migratory Bird
BLM	None
USFS	None
NDOW	Conservation Priority
Trends	
Historical ○	Unknown
Recent ○	Rangewide declines of 5%/year, declines probable but not confirmed in Nevada ^{7, EO}
Population Size Estimates	
Nevada (NBC) •	8,400
Global •	3,900,000 ⁶
Percent of Global	< 1%
Population Objective	
Increase by 50% ^{6, EO}	
Monitoring Coverage	
Source	Nevada Bird Count
Coverage in NV	Good
Key Conservation Areas	
Protection	Spring Mountains, Sheep Range, Virgin Mountains
Restoration	Unknown

Natural History Profile

Seasonal Presence in Nevada	
Spring – Summer	
Known Breeding Dates in Nevada	
Late March – mid August ^{3, EO}	
Nest and Nesting Habits	
Nest Placement	Above ground in dense shrub ⁸
Site Fidelity	Low ⁸
Food Habits	
Basic	Shrub gleaner
Primary Diet	Insects ⁸
Secondary Diet	Seeds during non-breeding season ⁸

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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

Although the Nevada Bird Count and the Nevada Breeding Bird Atlas project significantly expanded the known range and the population size estimate for this species, Nevada's Black-chinned Sparrow population may be somewhat disjunct from the main breeding populations in the Southwest and Mexico. Indeed, Black-chinned Sparrows are patchily distributed throughout much of their occupied range, and are sometimes absent from apparently suitable habitat.⁸ This, in part, may be due to a preference for some particular (but not yet quantified) "blend" of juxtaposed habitat types. Data from the Nevada Bird Count have provided some insight into the Black-chinned Sparrow's key habitat requirements in Nevada (see below), but there is still a large and problematic deficit in our knowledge of the biology and conservation needs of this reclusive species.⁵ Some evidence exists that Black-chinned Sparrows tend to avoid close proximity to development,¹ and furthermore, their habitat preferences seem to vary among the different regions within their breeding range.⁴

Abundance and Occupancy by Habitat

Birds / 40 ha on NBC Transects in the Mojave Region

Primary Habitat at Transect	Transects Occupied	Birds/40 ha (95% C.I.)
Pinyon-Juniper	92% (11/12)	2.0 (0.9 – 3.1)
Montane Shrubland	75% (6/8)	0.9 (0.3 – 1.5)
Montane Riparian	44% (4/9)	1.4 (0.1 – 1.5)
Joshua Tree	15% (3/20)	1.1 (0.3 – 1.9)

- In southern California chaparral, densities as high as 37 birds / 40 ha [0.37 / ac] reported⁴

Nevada-Specific Studies and Analyses

Landscape Associations (NBC data)

Black-chinned Sparrows were strongly associated with percent cover of Pinyon-Juniper habitat in both multivariate and univariate regressions (*Appendix 3*). More interestingly, they were especially numerous in NBC transects where Pinyon-Juniper and Mojave Scrub habitats were both present (i.e. "edge" areas between lower-elevation shrubland and higher-elevation woodland), as shown by a strong interaction term between these two cover types in the multivariate logistic regression. There were positive but weaker associations of Black-chinned Sparrow density with Montane Shrubland and Montane Riparian habitats. The species was never detected on transects containing any Mesquite-Acacia habitat, or more than 3% cover of Salt Desert habitat. These findings are consistent with a preference for a specific "blend" of different woodland and grassland patches.

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Main Threats and Challenges

Habitat Threats

Threats are not well documented, but may include:

- Alteration of fire regimes that are increasing the density of pinyon-juniper woodlands
- Heavy grazing by horses, burros, or livestock⁸
- Invasive plants EO
- Heavy OHV use⁸

Research, Planning, and Monitoring Challenges

- Poor understanding of Nevada population trends and habitat / landscape preferences
- Poor understanding of the causes of probable, ongoing declines

Conservation Strategies

Habitat Strategies

- Pinyon-Juniper (p. Hab-16-1), Montane Shrubland (p. Hab-14-1), and Joshua Tree (p. Hab-8-1) habitat conservation strategies benefit this species
- Thinning overgrown pinyon-juniper woodlands near their shrubland interface may be beneficial

Research, Planning, and Monitoring Strategies

- Conduct studies to better pinpoint key habitat and landscape features that are important to Black-chinned Sparrows
- Continue monitoring to determine Nevada population trends
- Conduct further research to identify and quantify conservation threats

Public Outreach Strategies

- None identified

References: ¹Bolger et al (1997); ²Floyd et al. (2007); ³GBBO unpublished Atlas data; ⁴Hargrove (2010); ⁵Nevada Wildlife Action Plan Team (2006); ⁶Rich et al. (2004); ⁷Sauer et al. (2008); ⁸Tenney (1997); ^{EO} Expert opinion