

Bendire's Thrasher

Toxostoma bendirei



Photo by Dorothy Crowe

Habitat Use Profile

Habitats Used in Nevada	
Joshua Tree Mesquite-Acacia (Mojave Scrub)	
Key Habitat Parameters •	
Plant Composition	Joshua tree, <i>Yucca</i> spp., cholla (<i>Cylindropuntia</i> spp.), mesquite, acacia, squawtea, cheese bush, desertthorn, and similar shrubs ^{3, 6, EO}
Plant Density	Intermediate ³
Mosaic	Patches of preferred overstory species, interspersed with Mojave Scrub shrubs (creosote bush, cholla, or transitional areas into blackbrush) and open areas ³
Distance to Water	Unimportant ^{EO}
Response to Vegetation Removal	Negative, but exotic weed control encouraged ³
Area Requirements •	
Minimum Patch Size	200 ha [500 ac] ^{3, EO}
Recommended Patch Size	> 1,000 ha [2,500 ac] ^{EO}
Home Range / Territory Size	Unknown

Conservation Profile

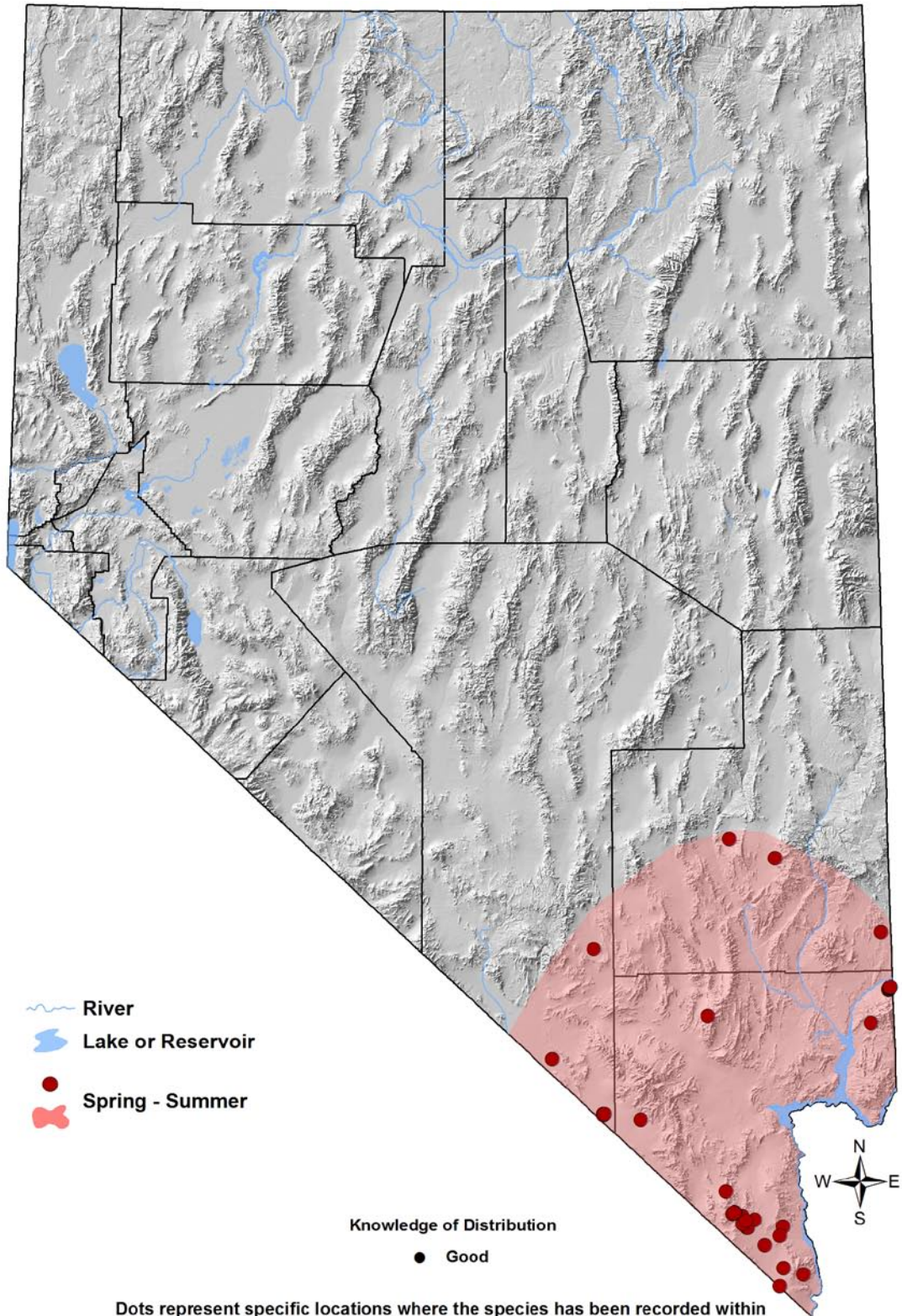
Priority Status	
Conservation Priority Species	
Species Concerns	
Historical and recent declines Small population size Habitat threats	
Other Rankings	
Continental PIF	Watch List
Audubon Watchlist	Red
NV Natural Heritage	S1
USFWS	Bird of Conservation Concern, Migratory Bird
BLM	None
USFS	None
NDOW	Conservation Priority
Trends	
Historical •	Rangewide declines of 5.7% / year since 1966 ⁷
Recent ○	Recently stabilizing, but patterns in Nevada unclear ¹
Population Size Estimates	
Nevada •	< 50 ^{EO}
Global •	130,000 ⁵
Percent of Global	< 1%
Population Objective	
Increase by 100% ^{5, EO}	
Monitoring Coverage	
Source	Nevada Bird Count
Coverage in NV	Fair / Poor
Key Conservation Areas	
Protection	Valleys and foothills of the McCullough and Newberry Mts., Tule Desert, Delamar Valley, Joshua Tree habitats throughout Clark and Nye counties
Restoration	Joshua Tree habitats throughout Clark and Nye counties

Natural History Profile

Seasonal Presence in Nevada	
Spring – Summer	
Known Breeding Dates in Nevada	
Mid-March – early July ^{4, 6}	
Nest and Nesting Habits	
Nest Placement	1 – 1.5 m [3 – 5 ft] above ground in trees or tall shrubs ³
Site Fidelity	Unknown
Food Habits	
Basic	Ground / litter forager
Primary Diet	Terrestrial invertebrates ³
Secondary Diet	Seeds, berries ³

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Dots represent specific locations where the species has been recorded within the last 12 years. Lighter colors represent broader area within which the species may occur in appropriate habitat types.

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Overview

Bendire's Thrasher, much like Le Conte's Thrasher, has a restricted geographical range whose northern extent includes a small population in Nevada's Mojave Desert region. However, unlike Le Conte's Thrasher, Bendire's Thrasher partially migrates southward out of Nevada during the winter. Many aspects of the biology, habitat use, and conservation status of Bendire's Thrasher have not been well-studied, but this work has recently been initiated by Dawn Fletcher of the Public Lands Institute at UNLV and NPS, and will need to be continued to gain a better understanding of the species' conservation needs. It appears that Bendire's Thrasher prefers landscapes with a scattered presence of taller vegetation (such as Joshua trees or mesquite) within a broader Mojave shrubland mosaic. Bendire's Thrasher also tends to occur in areas where shrubs are denser and taller than is the case for Le Conte's Thrasher.

Bendire's Thrasher has suffered substantial declines over the last half-century,⁷ and is particularly vulnerable to further declines because of its small population size and use of restricted habitat. For these reasons, it is an Evaluation Species under the Clark County MSHCP.¹ Unfortunately, Bendire's Thrasher is difficult to monitor satisfactorily using standard multi-species monitoring programs (BBS and NBC) because of its global rarity and spotty occurrence across the landscape. Development of a more focused and effective monitoring strategy is therefore a priority.

Nevada's population is probably < 50 birds, compared with California's estimated population of < 400 birds,² although rigorous estimates are difficult to generate. The greatest known concentration of birds in the Mojave Desert is located just outside the Nevada border in the vicinity of the New York Mountains east of Baker, California.⁶ Successful conservation of the Mojave population may therefore best be approached in coordination with California agencies managing these lands.

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.)
Joshua Tree	15% (3/20)	0.3 (0.1 – 0.5)
Mesquite-Acacia	14% (2/14)	1.3 (n/a)
Mojave Scrub	4.5% (1/22)	1.0 (n/a)

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Nevada-Specific Studies and Analyses

Landscape Associations (NBC data)

Bendire's Thrashers have been detected on only six point-count transects, which are insufficient for conducting statistical analysis. However, of these six transects:

- All six contained a substantial amount of the Mojave Scrub habitat type
- All six contained at least some of the denser shrub cover associated with dry washes
- Only one transect had substantial mesquite cover
- Joshua Trees were present on three of the six occupied transects

Main Threats and Challenges

Habitat Threats

The basis for assessing threats is incomplete, but there is cause for concern about the following causes of potential habitat loss or degradation:^{EO}

- Urban, suburban, and agricultural development
- Energy (wind and solar) development
- Fire
- Invasive plants
- Heavy OHV use
- As with Le Conte's Thrasher, habitat fragmentation may be a concern, but further information on home range requirements is needed to make this evaluation

Research, Planning, and Monitoring Challenges

- Incomplete understanding of habitat use parameters, particularly regarding the importance of Joshua Trees or other taller vegetation
- Nature, scope, and severity of threats are not well understood
- Tolerance of Bendire's Thrasher to human encroachment and disturbances of intermediate-to-low intensity is unknown in Nevada, and conflicting reports exist for other parts of the species' range³

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- Monitoring is difficult due to the species' rarity and its unpredictability in occurrence across the landscape. Bendire's Thrashers may take advantage of ephemeral resources from year to year, and may therefore require large landscapes to support vagrancy

Conservation Strategies

Habitat Strategies

- Joshua Tree (p. Hab-8-1) and Mesquite-Acacia (p. Hab-10-1) habitat conservation strategies benefit this species
- Protect occupied habitat at the recommended patch size from habitat conversion, energy development, and fire as much as possible
- Monitor and (if necessary) limit OHV use in occupied habitat
- Control invasive weeds in and near occupied habitat to reduce fire risk, wherever possible

Research, Planning, and Monitoring Strategies

- Inventory and map important habitat, especially Joshua Tree habitat
- Developed an improved, focused method for monitoring Bendire's Thrashers; this may include use of call playback surveys (Dawn Fletcher, pers. comm.)
- Collect additional monitoring and survey data, including data from areas outside the current known range of the species, to better determine northern extent of breeding range, and to improve estimates of population size and trends in Nevada
- Conduct studies to better estimate minimum patch size, home range, landscape mosaic use, vagrancy, and response to edge effects
- Estimate population losses to solar and wind development scenarios

Public Outreach Strategies

- Promote additional land protections for critical habitat

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References: ¹Clark County (2000); ²England and Laudenslayer (1989); ³England and Laudenslayer (1993); ⁴GBBO unpublished Atlas data; ⁵Rich et al. (2004); ⁶Shuford and Gardali (2009); ⁷Sauer et al. (2008); ^{EO} Expert opinion



Bendire's Thrasher habitat in southern Nevada. Photo by Dawn Fletcher.