

# Le Conte's Thrasher

*Toxostoma lecontei*



Photo by Dawn Fletcher

## Habitat Use Profile

Habitats Used in Nevada	
Salt Desert Scrub (Mojave region) Mojave Scrub Mesquite-Acacia Joshua Tree	
Key Habitat Parameters •	
Plant Composition	Saltbush, cholla ( <i>Cylindropuntia</i> spp.), <i>Yucca</i> spp., cactus ( <i>Opuntia</i> spp.), mesquite, creosote bush (but usually avoids pure stands) <sup>9</sup>
Plant Density & Size	Shrub spacing usually < 15 m [50 ft], shrub height usually < 2.5 m [8 ft] <sup>9</sup>
Mosaic	Multiple species of shrub, tree, or cactus preferred; ephemeral washes with high shrub cover favored <sup>9</sup> , E <sup>0</sup>
Soil, Litter Cover	Undisturbed, sandy soils with ample shrub litter cover <sup>8</sup>
Distance to Water	Unimportant <sup>9</sup>
Response to Vegetation Removal	Negative, but exotic weed control encouraged <sup>E0</sup>
Area Requirements •	
Minimum Patch Size	160 ha [400 ac] <sup>8</sup> , E <sup>0</sup>
Recommended Patch Size	> 1,000 ha [2,500 ac] <sup>5</sup> , E <sup>0</sup>
Home Range	Year-round 40 - 100 ha [100 - 250 ac] <sup>9</sup>

## Conservation Profile

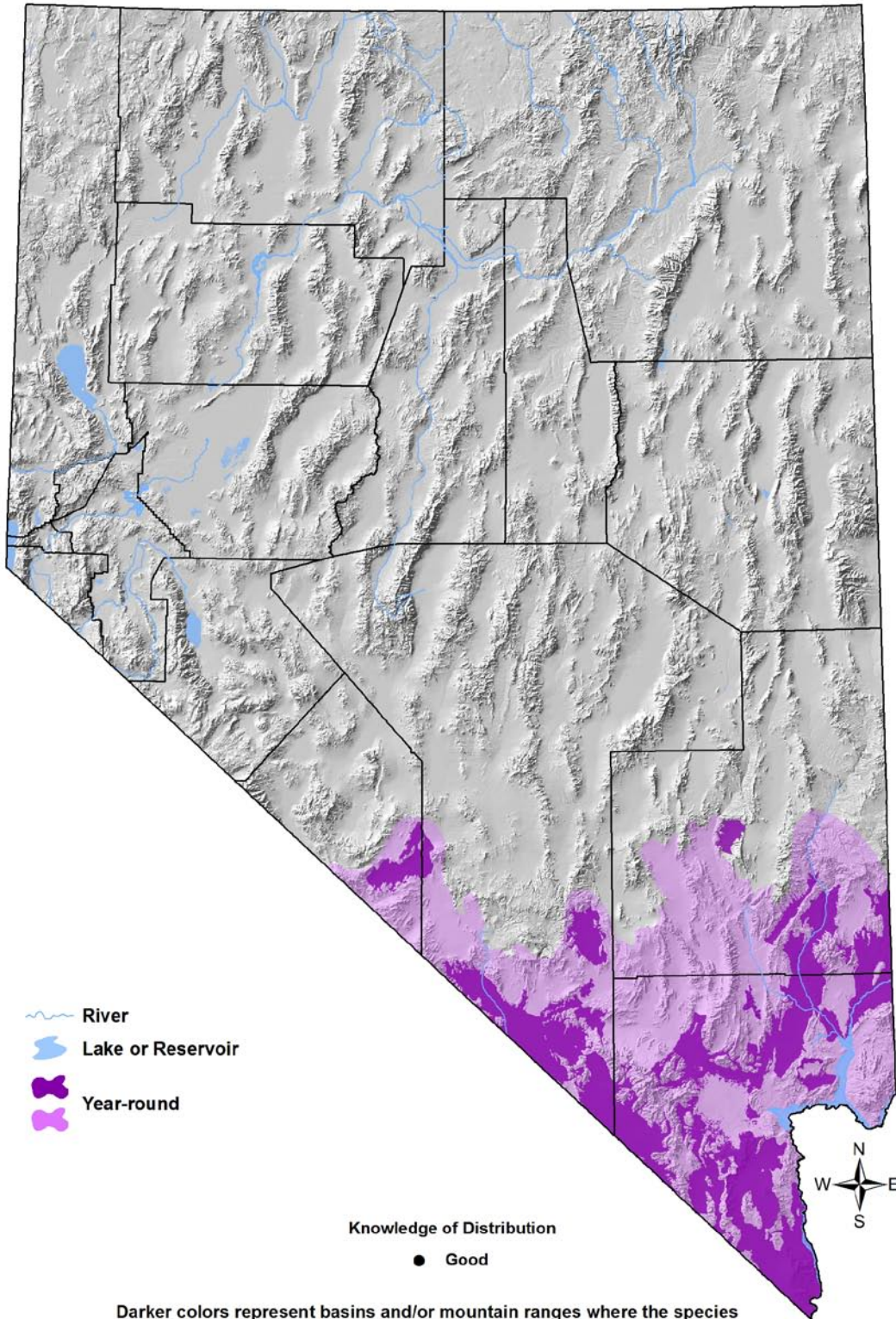
Priority Status	
Conservation Priority Species	
Species Concerns	
Small population size Habitat threats	
Other Rankings	
Continental PIF	Watch List
Audubon Watchlist	Yellow
NV Natural Heritage	S2
USFWS	Bird of Conservation Concern, Migratory Bird
BLM	Sensitive Species
USFS	None
NDOW	Conservation Priority
Trends	
Historical •	Rangewide declines, pattern in Nevada unclear <sup>9</sup>
Recent ○	Assumed to be stable <sup>7</sup>
Population Size Estimates	
Nevada •	< 100 E <sup>0</sup>
Global •	150,000 <sup>6</sup>
Percent of Global	< 1%
Population Objective	
Maintain / Increase <sup>6</sup> , E <sup>0</sup>	
Monitoring Coverage	
Source	Nevada Bird Count
Coverage in NV	Fair
Key Conservation Areas	
Protection	Salt Desert Scrub, Joshua Tree / <i>Yucca</i> spp., and ephemeral washes in Clark and Nye Counties; see "Conservation Strategies" for additional detail
Restoration	Same

## Natural History Profile

Seasonal Presence in Nevada	
Year-round	
Known Breeding Dates in Nevada	
Late February - July <sup>3</sup>	
Nest and Nesting Habits	
Nest Placement	Above ground in dense, often thorny shrub, such as <i>Cylindropuntia</i> spp., saltbush <sup>9</sup>
Site Fidelity	Unknown
Other	Maintain territory year-round <sup>9</sup>
Food Habits	
Basic	Ground / litter forager
Primary Diet	Terrestrial arthropods; seeds <sup>9</sup>
Secondary Diet	Lizards E <sup>0</sup>

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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

Le Conte's Thrasher has a small geographical range within which it is patchily distributed at low densities. It occurs in low elevation (-75 – 500 m [-250 – 1600 ft]), sandy desert habitats, where it can survive and nest without any access to water.<sup>8,9</sup> Home ranges are large and may encompass substantial movements within or across years.<sup>8,9</sup> This thrasher is generally associated with nearly flat landscapes with short, open stands of scrublands with specific shrub components, such as saltbush, cholla (specifically *Cylindropuntia* spp.<sup>EO</sup>), prickly pear cactus, or yucca.<sup>2, 4</sup> Creosote bush is often present, but not in pure stands.<sup>9</sup> Mesquite-Acacia habitat is frequently inhabited, but only if these key shrub components are present. Based on anecdotal data, Le Conte's Thrasher appears to use mesquite stands that are not occupied by Crissal Thrasher.<sup>8</sup> Similarly, Le Conte's and Bendire's Thrashers also seem to partition habitat, with Le Conte's using areas where shrubs are less dense and lower than those used by Bendire's.<sup>9</sup> Interestingly, Le Conte's Thrasher is part of a nesting guild (including Cactus Wren and Loggerhead Shrike) that may compete for limited nest sites among thorny dense plants.<sup>8</sup> Therefore, areas that contain cholla or similarly desirable nesting substrates may be of particular conservation interest for this species. It has also been suggested (though not yet demonstrated) that Le Conte's Thrashers have substrate preferences for the sediments associated with ancient Pliocene lakebeds.<sup>EO</sup>

Le Conte's Thrasher is an Evaluation Species under the Clark County MSHCP<sup>1</sup>, but it is still insufficiently studied in Nevada. These thrashers are known to be sensitive to habitat disturbances and conversion<sup>9</sup>, and they are at risk of declines (which have been substantial in the California desert)<sup>10</sup> because of their small population size and large home range requirements.

## 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.)
Mesquite-Acacia	50% (7/14)	3.3 (-2.0 – 8.6)
Mojave Scrub	32% (7/22)	1.3 (0.4 – 2.3)
Salt Desert	20% (2/10)	1.9 (0.0 – 3.9)
Joshua Tree	10% (2/20)	2.3 (-11.1 – 15.8)

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## Nevada-Specific Studies and Analyses

### Landscape Associations (NBC data)<sup>4</sup>

Although detected only on a small number of transects, a multivariate association with “Mesquite-Acacia” and “Barren” habitat was apparent (table below; note that as classified, Barren habitat often contained sparse cover of Mojave Scrub and Salt Desert shrubs). Raw NBC data suggest further that Le Conte's Thrashers are not dependent on large amounts of Mesquite vegetation itself, but rather are associated with some combination of Mojave Scrub, Salt Desert, and Barren habitat vegetation. Le Conte's Thrashers were detected farther from water than average, indicating that the bird does not require access to surface water.

### Logistic Regression Summary

Habitat Type (Proportion w/in 200 m)	sign	p-value
Mojave Scrub	+	0.283
Mesquite-Acacia	+	<b>0.003</b>
Salt Desert Scrub	+	0.325
Barren	+	<b>0.001</b>
DISTANCE TO WATER	+	<b>0.015</b>

### Fletcher Thesis<sup>2</sup>

Models based on 45 detections indicated that Le Conte's Thrashers occur within areas of little topographic relief such as valley bottoms near dry lake beds (playas). They were never observed on slopes greater than 5 degrees. There were strong positive associations with playas and saltbush assemblages (specifically, *Atriplex polycarpa* and *A. canescens*). Positive associations were also determined for three other plant assemblages: wash vegetation, cholla (*Cylindropuntia* spp.), and Mojave mixed scrub (dominated by *Yucca schidigera*). A predictive map was created that identified 4,000 km<sup>2</sup> [990,000 ac] of potentially suitable habitat within Clark County.

## Main Threats and Challenges

### Habitat Threats

- Due to their requirement for large home ranges, the Le Conte's Thrashers are sensitive to habitat fragmentation, degradation, or conversion stemming from a variety of disturbances, including development (urban, agricultural, or industrial), heavy OHV use, and fire<sup>9</sup>

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- Extended, late-summer livestock grazing is harmful to habitat<sup>10</sup>
- Of particular concern in southern Nevada are plans for developing large solar energy gathering facilities which could affect significant acreages of occupied habitat<sup>EO</sup>
- Invasive plants may degrade habitat, if they change the open habitat structure and fire frequency of a site
- Feral cats and dogs reduce nest success near human settlements<sup>9</sup>

### Research, Planning, and Monitoring Challenges

- Le Conte's Thrashers are challenging for resource managers because they occur at low densities, have a small population size, and may be absent from large areas of seemingly suitable habitat



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

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## Conservation Strategies

### Habitat Strategies

- Salt Desert Scrub (p. Hab-18-1), Mojave Scrub (p. Hab-12-1), Mesquite-Acacia (p. Hab-10-1), and Joshua Tree (p. Hab-8-1) habitat conservation strategies benefit this species
- Specific areas that merit conservation attention<sup>EO</sup> include
  - Saltbush stands in vicinity of Corn Creek field station, Desert NWR (IBA candidate area)
  - Piute Valley between Searchlight and Cal-Nev-Ari
  - Valleys and washes between McCullough Range and Highland Mts., and between McCullough Range and Lucy Gray Mts.
- Protect occupied habitat at the recommended patch size from habitat conversion, energy development, and fire as much as possible
- Maintain corridors of suitable habitat at the recommended patch size between currently occupied areas
- Where development proceeds in or near occupied habitat, encourage contiguous rather than patchy development patterns to minimize habitat fragmentation
- 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 critical habitat
- Assess invasive weed, fire, land use, and energy development threats to critical habitat
- Estimate population losses to solar and wind development scenarios
- Improve monitoring efforts (especially during the early breeding season which is currently poorly monitored) and generate improved population size and trend estimates
- Investigate the possible role of substrate type in determining species distribution

### Public Outreach Strategies

- Promote additional land protections for critical habitat
- Educate the public about the impacts of free-ranging cats in / near critical habitat

References: <sup>1</sup>Clark County (2000); <sup>2</sup>Fletcher (2009); <sup>3</sup>GBBO unpublished Atlas data; <sup>4</sup>GBBO unpublished NBC data; <sup>5</sup>Nevada Wildlife Action Plan Team (2006); <sup>6</sup>Rich et al. (2004); <sup>7</sup>Sauer et al. (2008); <sup>8</sup>Sheppard (1973); <sup>9</sup>Sheppard (1996); <sup>10</sup>Shuford and Gardali (2008); <sup>EO</sup> Expert opinion