

Le Conte's Thrasher

Toxostoma lecontei

Conservation Profile



Photo by Dawn Fletcher

Habitat Use Profile

Main Habitats Used in Nevada	Mojave Scrub, Joshua Tree Mesquite-Catclaw
Key Habitat Use Parameters	<p>Uses very arid shrublands in Mojave Desert, usually flat areas with little vertical relief [p1, EO]</p> <p>Prefers habitat containing ≥ 1 of: saltbush, cholla, <i>Yucca</i>, mesquite, Joshua Tree; avoids pure stands of creosote [p1, p3, i6]</p> <p>Typical shrub height < 2.5 m, shrub spacing usually less than 15 m [p1]</p> <p>Tends to prefer areas such as shallow washes where vegetation is slightly better developed [EO]</p> <p>Requires undisturbed substrates with some litter cover under shrubs for foraging; sandy soils preferred [p1]</p> <p>Usually found far from water, does not need to drink [p1]</p>
Minimum Patch Size	<p>Territory size 3.5 – 18 ha; year-round home range 40 - 100 ha [p1, p3]</p> <p>1,000 ha of suitable habitat estimated to support viable population of up to 250 birds [p3]</p>

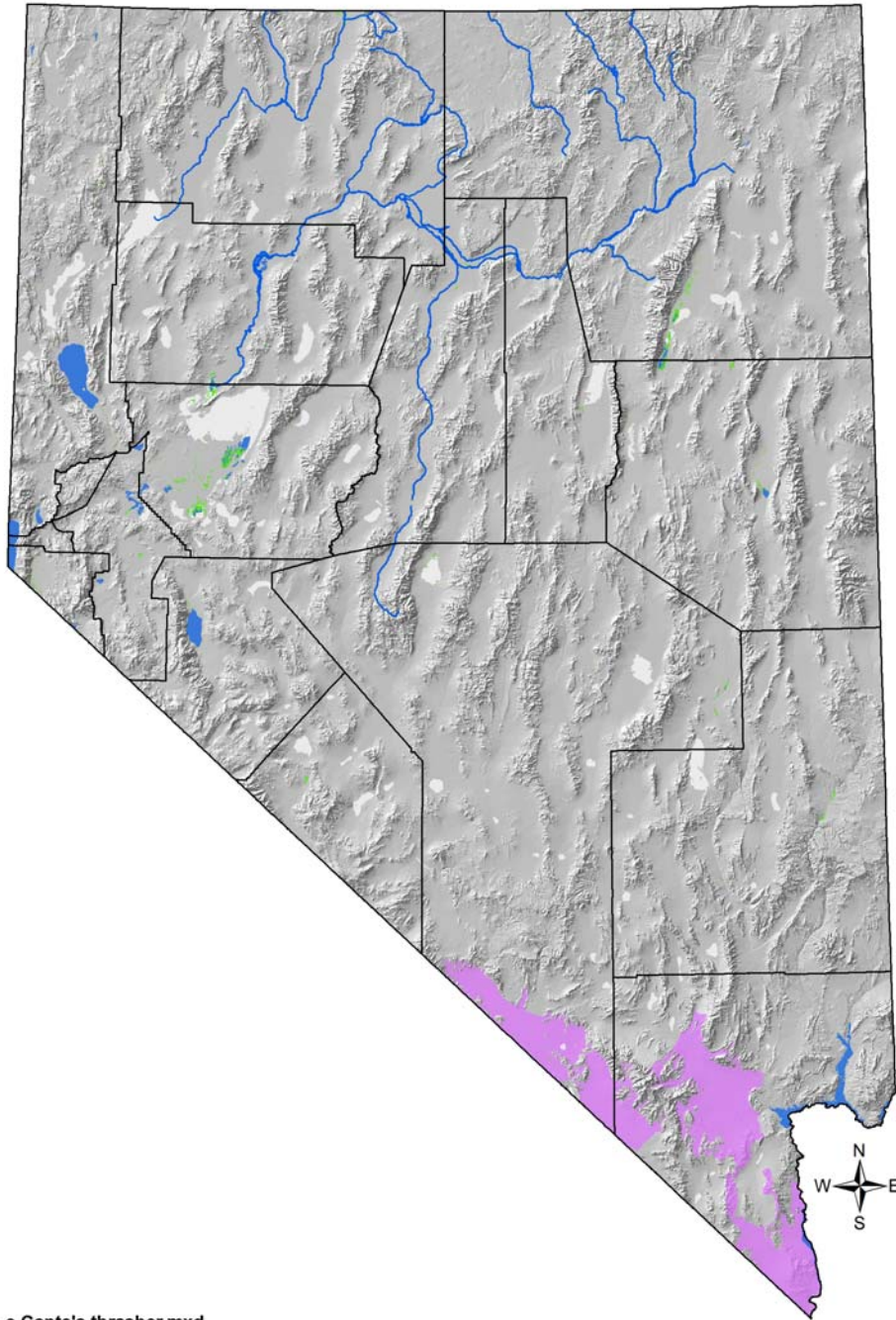
Priority Status	Conservation Target
Reasons for Priority Status	Threats Small Population Size
Other Rankings	Continental PIF: Watch List Audubon Watchlist: Yellow Natural Heritage: S2 USFWS: Bird of Conservation Concern (Mojave), Migratory Bird BLM: Sensitive Species NDOW: Conservation Priority Also a Covered species under the CC MSHCP
Trends	Historical: Substantial declines due to development [p1] Recent: Stable [i1], but BBS surveys probably not adequate for this species [p1]
Population Size Estimates	Nevada (NBC): 20,000 [overestimate] Nevada (PIF): 9,700 [overestimate] Global: 150,000 [p5] Percent of Global: 6 – 13%
Population Objective	TBD
Monitoring Coverage	Source: Nevada Bird Count Coverage and Adequacy: Good; however, early part of breeding season occurs prior to NBC field season
Key Conservation Areas	TBD

Natural History Profile

Seasonal Presence in Nevada	Year-round
Known Breeding Dates in Nevada	Late February – July [p4]
Nesting Habits	Nests in dense, often thorny shrubs and cacti, esp. cholla, saltbush [p1, EO] Maintain territories year-round [p5]
Food Requirements	Ground-forages and digs for arthropods, occasional seeds, but specific preferred food items poorly characterized [p1, p3]

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File: Le Conte's thrasher.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

Le Conte's Thrasher has small geographical range within which it is patchily distributed. Where present, this bird is typically uncommon because it requires a large home range that may include year-to-year movements across the landscape [p4, p1]. Although frequently present on the Nevada Bird Count's designated "Mesquite-Catclaw" transects, Le Conte's Thrashers appear to require the presence of at least some Mojave Scrub shrubland. To some extent, Le Conte's and Bendire's Thrashers seem to partition habitat, with Le Conte's using areas where shrubs are less dense and lower than those used by Bendire's [p1]. Le Conte's Thrashers are still not a well-studied species (but see Fletcher 2009), but they are known to be sensitive to disturbances, and they are vulnerable to declines because of their low population size and use of large seemingly-unoccupied landscapes.

ABUNDANCE AND OCCUPANCY BY HABITAT

- NBC data

Le Conte's Thrasher						
	Primary Habitat Type Present at Transect	No. Transects with Sightings	Nevada Bird Count Sightings per 40 ha			
			average	95% confidence interval**	% transects occupied	
Great Basin	Joshua Tree	1	1.3	n/a	1.0 (1/1)	
Mojave	Joshua Tree	2	2.3	-11.1 - 15.8	0.1 (2/20)	
	Lowland Riparian	1			0.03 (1/36)	
	Mesquite-Catclaw	7	3.3	-2.0 - 8.6	0.5 (7/14)	
	Mojave Scrub	7	1.3	0.4 - 2.3	.032 (7/22)	
	Salt Desert	2	1.9	0.0 - 3.9	0.2 (2/10)	

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NEVADA-SPECIFIC STUDIES AND ANALYSES

Landscape Associations (NBC data)

- Logistic regression p-values for the South (173 transects) regions:

Veg Type (Proportion)	Coef	S only (logit)
Mojave Scrub	+	0.283
Mesquite-Catclaw	+	0.003
Salt Desert	+	0.325
Lowland Riparian	-	0.955
Barren	+	0.001
DISTANCE TO WATER	+	0.015

- Although present on only 19 transects, a multivariate association with “Mesquite-Catclaw” and “Barren” habitat was apparent. In the Landfire Existing Vegetation Type layer, areas designated as “barren” often had sparse shrub cover.
- There is also clearly no relationship with distance to water, indicating that the bird does not require access to surface water.
- Examination of raw NBC data (below) for the 19 occupied transects suggests that Le Conte’s Thrashers are not dependent on presence of large amounts of Mesquite, but are always associated with some combination of “Mojave Scrub” and “Barren”.
- As seen in the table below, Le Conte’s Thrashers were never observed on any transect that contained any significant amount of GIS-designated habitat cover other than Mojave Scrub, Mesquite-Catclaw, Barren, or Lowland Riparian.

TRANSECTID	HABITAT	LCTH	MojaveScrub	Mesquite	Barren
MQC-ACACIA	Mesquite	9.80	36.63	24.57	2.369
SD-128	Salt Desert	2.04	48.46	.00	51.545
MJS-476	Mojave Scrub	2.04	94.00	.00	.888
JT-74	Joshua Tree	2.04	87.52	.00	.000
MQC-365	Mesquite	1.59	9.84	18.77	67.589
MQC-75172	Mesquite	1.27	14.64	70.75	4.025
JT-LAURA2	Joshua Tree	1.27	46.03	.00	.000
MJS-489	Mojave Scrub	1.02	78.06	11.27	1.415
MQC-1NEIL	Mesquite	.95	19.21	21.56	27.675
MQC-28364	Mesquite	.95	5.27	10.55	62.748
MJS-474	Mojave Scrub	.76	56.53	17.21	23.308
JT-486	Joshua Tree	.76	72.26	12.32	2.836
SD-159	Salt Desert	.64	5.79	.00	93.647
MJS-148	Mojave Scrub	.51	41.19	.00	58.642
MJS-SLOAN	Mojave Scrub	.42	81.25	.00	.623
MJS-1447	Mojave Scrub	.32	29.66	.00	.000
MJS-469	Mojave Scrub	.25	63.95	.00	31.692

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MQC-3NEIL	Mesquite	.23	30.21	25.87	34.020
LR-LAME6	Lowland Riparian	.16	46.53	29.73	11.213

Fletcher Thesis [insert main findings here]

MAIN THREATS AND 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 [i6]
- Due to requirement for large home ranges, the species is sensitive to habitat fragmentation, degradation, or conversion stemming from a variety of disturbances [p3]
- Important sources of habitat loss include OHV use, development (urban, agricultural, or industrial), and fire [p1, p3]
- Of particular concern in southern Nevada are plans for developing large solar energy gathering facilities [EO]
- Invasive plants may degrade habitat [EO]
- Introduced predators [EO] [panel: clarify species]

CONSERVATION STRATEGIES

Habitat Strategies

- General Mojave Scrub, Joshua Tree, and Mesquite-Catclaw conservation strategies
- Attempt to control invasive weeds in and near critical habitat that would alter fire regime. Monitor weeds and determine scope of fire threat

Research, Planning, and Monitoring

- Identify and map critical habitat areas
- Estimate potential population losses to solar energy
- Promote additional land protection status in key habitat areas
- Improve monitoring efforts, especially during early part of breeding season
- Collect additional data on occupancy patterns in NV, and attempt to generate more precise population size estimates and trend information

Other

- Limit development and serious disturbance in critical habitat areas.

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- In areas where solar development is planned, conduct pre-development surveys and avoid all occupied habitat to the extent possible
- Where development occurs, encourage contiguous rather than disconnected development pattern to avoid widespread fragmentation
- Enforcement of OHV regulations in critical habitat areas, including public outreach through signage

OTHER PRIORITY SPECIES WITH SIMILAR CONSERVATION STRATEGIES

- Bendire's Thrasher

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

[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