

Black-throated Sparrow (*Amphispiza bilineata*)

NMPIF level: Species Conservation Concern, Level 2 (SC2)

NMPIF assessment score: 14

NM stewardship responsibility: Low-Moderate

National PIF status: Stewardship (Southwest region)

New Mexico BCRs: 16, 34, 35, (18) (Most in 35)

Primary breeding habitat(s): Chihuahuan Desert Shrub

Other habitats used: Great Basin Desert Shrub, Plains-Mesa Sand Shrub

Summary of Concern

Black-throated Sparrow is a species of the Southwest and intermountain deserts. Although still relatively common, it has shown steady long-term declines across its range and in New Mexico.

Associated Species

Gambel's Quail, Lesser Nighthawk, Ash-throated Flycatcher, Western Kingbird, Loggerhead Shrike (SC2), Verdin, Cactus Wren, Curve-billed Thrasher, Bendire's Thrasher (SC1), Cassin's Sparrow, Pyrrhuloxia, Scott's Oriole

Distribution

Black-throated Sparrow is a summer migrant across much of the Intermountain West, becoming resident farther south. Migratory populations breed locally in eastern Washington south to southern California and Nevada, and northern portions of Arizona and New Mexico. Resident populations extend across the southern portions of the border states and east into central Texas, and south to central Mexico (Johnson et al. 2002).

In New Mexico, Black-throated Sparrow breeds primarily in desert scrub in the southern part of the state, less commonly in other scrub habitats in the north (Parmeter et al. 2002).

Ecology and Habitat Requirements

Black-throated Sparrows are common in desert scrub habitat associated with washes, low hills and alluvial fans, but avoid lowland desert floors or sinks. Habitat and vegetation density may influence habitat selection more than specific shrub species, although Black-throated Sparrow is closely associated with creosote bush through much of its southern range. The species also occurs in desert scrub with ocotillo, cholla, mesquite, acacia, sagebrush and other shrub types, and higher into pinyon-juniper woodlands (Phillips et al. 1964, Raitt and Maze 1968, Naranjo and Raitt 1993, Johnson et al. 2002).

Nesting activity may begin in the early spring, and a second brood may be triggered by the arrival of summer rains in June or July (Delesantro 1978, Zimmer 1993). In several studies in Arizona and New Mexico, the majority of nests were in creosote, the remainder divided among other shrub species (Raitt and Maze 1968, Johnson et al. 2002). Black-throated Sparrows forage on the ground for insects during the breeding season and subsist on seeds and forbs during the winter (Johnson et al. 2002).

Conservation Status

Species Assessment

DISTRIBUTION	3
THREATS	2
GLOBAL POPULATION SIZE	2
LOCAL POPULATION TREND	5
IMPORTANCE OF NEW MEXICO TO BREEDING	2
COMBINED SCORE	14

Black-throated Sparrow is a Species Conservation Concern, Level 2 species for New Mexico, with a total assessment score of 14. It receives a maximum vulnerability score of 5 from NMPIF for negative local population trend.

Population Size

Total population for New Mexico is unknown. PIF estimates a species population of 27 million, and that New Mexico holds about 6.2 percent of the species population, or about 1,700,000 birds.

Population Trend

Although still relatively common over much of its range, this species has shown steep and statistically significant declines. Across the U.S., BBS data show a 4.1% annual decline ($p=0.00$) from 1966 to 2004. Downward trends in New Mexico have been milder, but have steepened during the 1980-2004 period (-3.0 %, $p=0.01$). This, together with regional trend data, justifies a maximum local trend score of 5. BBS data for 1966-2004 are:

	Annual Trend (%)	P-value	Number of Routes
New Mexico	-1.3	0.26	41
FWS Region 2	-4.7	0.00	161
Western States	-2.2	0.00	275

Threats

NMPIF assigns this species a 2 for threats to breeding in New Mexico, indicating that no major threats are foreseen. However, the question of what is causing downward population trends remains open. Some habitat may be lost locally around urban/developed areas. In the Great Basin, grazing appears to have no significant effects on populations, but more data are needed in this area (Medin 1986). In the Great Basin, habitat fire suppression may allow shrub vegetation to become thicker than is preferred by this species, and resulting high-intensity fires may alter vegetative composition (Cooperrider and Wilcove 1995). This species is susceptible to nest parasitism by Brown-headed Cowbirds, but in desert scrub habitat with minimal grazing this is not a significant problem. Populations also may be responsive to drought (Johnson et al. 2002). Herbicide treatments to clear land for grazing may negatively affect this species in New Mexico.

Management Issues and Recommendations

It is important to understand reasons for regional population declines in this species. Management should focus on maintaining large blocks of healthy Chihuahuan Desert Scrub habitat.

NMPIF Recommendations

- Where appropriate, manage to maintain semi-open areas of evenly spaced, one to three-meter-high shrubs (Johnson et al. 2002).

Species Conservation Objectives

NMPIF Objectives

- Seek to better understand reasons for declines.
- Seek to stop or reverse downward population trends in New Mexico.

Sources of Information

Cooperrider, A. Y., and D. S. Wilcove. 1995. Pp. 44–45 *in* Defending the desert: conserving biodiversity on BLM lands in the Southwest. Environ. Def. Fund., New York.

Delesantro, M. C. 1978. The breeding ecology of the Black-throated Sparrow in southern New Mexico. Master's thesis, New Mexico State Univ., Las Cruces, NM.

Johnson, M. J., C. van Riper III, and K. M. Pearson. 2002. Black-throated Sparrow (*Amphispiza bilineata*). *In* The Birds of North America, No. 637 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Medin, D. E. 1986. Grazing and passerine breeding birds in a Great Basin low-shrub desert. Great Basin Nat. 46(3):567–572.

Naranjo, L. G., and R. J. Raitt. 1993. Breeding bird distribution in Chihuahuan Desert habitat. Southwest Nat. 38(1):43–51.

Parmeter, J., B. Neville, and D. Emkalns. 2002. New Mexico Bird Finding Guide. New Mexico Ornithological Society, Albuquerque, NM.

Phillips, A., J. Marshall, and G. Monson. 1964. The birds of Arizona. Univ. of Arizona Press, Tucson, AZ.

Raitt, R. J., and R. L. Maze. 1968. Densities and species composition of breeding birds of a creosote bush community in southern New Mexico. Condor 70:193–205.

Zimmer, K. J. 1993. Spatial and temporal variation in the breeding and foraging ecology of Black-throated Sparrows. Ph.D. Diss., New Mexico State Univ., Las Cruces, NM.