

Black-chinned Sparrow (*Spizella atrogularis*)

NMPIF level: Species Conservation Concern, Level 1 (SC1)

NMPIF assessment score: 17

NM stewardship responsibility: Moderate

National PIF status: Watch List, Stewardship (Southwest region)

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

Primary breeding habitat(s): Montane Shrub

Other habitats used: Pinyon-Juniper Woodland, Chihuahuan Desert Shrub (winter)

Summary of Concern

Black-chinned sparrow is a sparsely distributed but locally common species that inhabits brushy or grassy slopes of the southwest United States and northern Mexico. New Mexico populations may be stable but the species bears close monitoring, as steep declines have been noted elsewhere.

Associated Species

Mourning Dove, Common Poorwill, Ash-throated Flycatcher, Bewick's Wren, Northern Mockingbird, Crissal Thrasher (SC2), Canyon Towhee, Rufous-crowned Sparrow, Scott's Oriole

Distribution

In the United States, Black-chinned Sparrow occupies a fragmented breeding range that includes much of California, southernmost portions of Nevada and Utah, transition zone areas of Arizona, central and southern New Mexico, and west Texas. The breeding range also extends south to central Mexico. Northern populations are migratory, while populations from southern Arizona and New Mexico south are considered resident. There are episodic invasions north into northern California and Oregon some years (Tenney 1997).

In New Mexico, Black-chinned Sparrow regularly occurs in appropriate habitat across the central and southern parts of the state, west of the plains (Parmeter et al. 2002). Breeding records extend north to Taos County, San Miguel County and probably San Juan County. The species is uncommon at best in winter in southwest New Mexico.

Ecology and Habitat Requirements

Black-chinned sparrows occupy arid shrublands on rugged, rocky slopes. They often are found on south-facing slopes up to almost 8,000 ft in elevation. Typical habitat configuration consists of moderately dense shrubs from 3-7 ft tall mixed with rocky outcroppings, a large grass component, and scattered large shrubs or trees. The species prefers young stands with openings in the brush cover, and avoids overgrown areas. It stays close to shrub cover, foraging low or on the ground. In northern portions of the year-round range, birds often move to lower-elevation desert scrub or dry brush habitat in winter (Tenny 1997).

Bailey (1928) described Black-chinned Sparrows as fairly common in New Mexico on slopes of chaparral, sagebrush, and Utah juniper from 2,000 to 2,700 m. In the Sandia Mountains, the species nests in rabbitbrush and Apache plume in arroyos; in the Organ Mountains, it frequents chaparral dominated by mountain mahogany, Apache plume, and scrub oak (Tenney 1997). In Arizona, breeding is described in chaparral dominated by scrub oak, and locally in pinyon-juniper woodland (Phillips et al. 1964, Davis and Russell 1995). Winter habitat in southwest New Mexico may resemble breeding habitat. The species also winters in desert scrub with mesquite, opuntia, ocotillo and yucca, often in washes and canyons (Tenney 1997).

Little breeding information is available for this species. In New Mexico, breeding occurs from mid-April to late June. Typical clutch size is 3-4. It is not known if multiple brooding occurs. Nests are generally placed in the center of shrubs concealed by dense foliage canopy, occasionally in forks of rarely-used dead shrubs (Tenny 1997).

Conservation Status

Species Assessment

DISTRIBUTION	4
THREATS	3
GLOBAL POPULATION SIZE	4
LOCAL POPULATION TREND	3
IMPORTANCE OF NEW MEXICO TO BREEDING	3
COMBINED SCORE	17

Black-chinned Sparrow is a Species Conservation Concern, Level 1 species for New Mexico, with a total assessment score of 17. Black-chinned Sparrow is a national PIF Watch List species, and a Stewardship species for the Southwest avifaunal biome. It receives vulnerability scores of 4 from PIF for its restricted (due to habitat preference) breeding range and small population size. Black-chinned Sparrow is a U.S. Fish and Wildlife Service (2002) national Bird of Conservation Concern.

Population Size

Total population for the state is unknown. PIF estimates a species population of 390,000, and that New Mexico holds about 12.5% of the species population, or about 49,000 birds. Density estimates based on suitable habitat are problematic for this species; it may be locally common in some areas and absent from other adjacent areas of suitable habitat (Tenny 1997).

Population Trend

Trends have been sharply negative in California, where the species is most common and best sampled by BBS. Negative trends have not been detected in New Mexico, but the species is very poorly sampled by BBS in the state. NMPIF assigns a score of 3 for local population trend, indicating uncertainty. BBS data for 1966-2004 are:

	Annual Trend (%)	P-value	Number of Routes
New Mexico	6.2	0.30	6
FWS Region 2	-2.4	0.21	19
Western BBS	-5.2	0.00	55

Threats

Population declines in southern California are attributed to various factors that have altered breeding habitat, including mining, ORV use, and real estate development (Tenny 1997). One study from San Diego County found Black-chinned Sparrow to be among the species most susceptible to negative effects of fragmentation across a gradient of increasing urbanization (Bolger et al. 1997). These factors are less significant in New Mexico, though development may be encroaching into breeding habitat in some areas, such as the Sandias. Suppression of the natural wildfire regime may alter vegetation on brushy slopes favored by this species. Overgrazing may reduce quality of chaparral breeding habitat; in west Texas, Black-chinned Sparrows increased with re-establishment of chaparral and grassland habitat after heavy livestock use (Wauer 1974). Extensive grazing in the Southwest may be linked to declines in

western sparrows (including Black-chinned) resulting from habitat degradation on wintering grounds (Desante and George 1994).

Management Issues and Recommendations

Management options for this species are limited. Attention should be paid to possible impacts of overgrazing in known breeding and wintering areas. Relatively frequent fires on rocky slopes may promote quality habitat.

NMPIF Recommendations

- Seek to maintain canyon slope habitat with a patchy mix of dense, tall native shrubs and a large grass component. Employ prescribed burns and/or grazing restrictions as needed to achieve desired conditions.
- Discourage new development activities in important breeding areas.

Species Conservation Objectives

PIF Objectives

The PIF North American Landbird Conservation Plan places Black-chinned Sparrow in the conservation action category Management. It sets a population objective of increasing the current population size by 50% over the next 30 years.

NMPIF Objectives

- Design and carry out surveys to better determine the status of New Mexico populations in different habitat areas.
- Maintain presence in suitable habitat throughout the Mexican Highlands, Chihuahuan Desert, Mogollon Rim (especially in the Black Range), and the southern third of the Colorado Plateau.
- Maintain known populations in the Sandias and along the Canadian Escarpment at Trujillo north to Mills Canyon.
- Maintain or enhance habitat in northerly areas such as the Rio Grande Gorge, White Rock Canyon, Santa Fe River Canyon and the Ortiz mountains so that small populations are maintained or can be established.

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