

## **Black-throated Gray Warbler (*Dendroica nigrescens*)**

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

NM assessment score: 16

NM stewardship responsibility: Low-Moderate

National PIF status: No special status in region

New Mexico BCRs: 16, 34, 35 (most in 16 and 34)

Primary breeding habitat(s): Pinyon-Juniper Woodland, Madrean Pine-Oak Woodland

### **Summary of Concern**

Black-throated Gray Warbler is associated with middle-elevation woodlands west of the Rocky Mountains. BBS data indicate that the New Mexico population may be declining; the species is threatened by loss or deterioration of mature pinyon-juniper woodland habitat.

### **Associated Species**

Great Horned Owl, Broad-tailed Hummingbird (SC2), Ash-throated Flycatcher, Plumbeous Vireo (SC2), Pinyon Jay (SC1), Mountain Chickadee, Juniper Titmouse (SC1), Bushtit, Western Bluebird (SC2), Black-headed Grosbeak

### **Distribution**

Black-throated Gray Warbler is a species of the Pacific and Intermountain West. It breeds from southern British Columbia to southern California, and Nevada to Wyoming, south to northern Mexico. This warbler is a short- to medium-distance neotropical migrant, wintering along the Pacific slope and southern highlands of Mexico, and in Baja California Sur (Guzy and Lowther 1997). Black-throated Gray Warblers breed in foothill and lower mountain areas throughout most of New Mexico, primarily west of the plains (Hubbard 1978, Parmeter et al. 2002).

### **Ecology and Habitat Requirements**

Black-throated Gray Warbler is generally associated with middle-elevation coniferous or mixed coniferous/deciduous woodland with brushy undergrowth, sometimes ranging into montane shrub associations or open forests with a mix of pines and deciduous trees (Guzy and Lowther 1997, Parmeter et al. 2002). In New Mexico, habitat is primarily pinyon-juniper and, in the far southwest, pine-oak woodland. This species tends to prefer large woodland stands, but it often uses edge habitat (Sedgwick 1987). During migration, it may occur statewide in wooded areas at lower and middle elevations (Hubbard 1978).

Birds arrive on breeding grounds beginning in late April, and breeding activities take place through May and June. Nests are usually located fairly close to the ground (though sometimes as high as 10 m) in pinyon pine, Douglas-fir, juniper or oak. Normal clutch size is 3 or 4 eggs, and a single brood per season is raised. Nests are sometimes parasitized by Brown-headed Cowbirds. Two of ten breeding records in New Mexico were of adults feeding cowbirds (S. O. Williams pers. comm., cited in Guzy and Lowther 1997). Diet information is scanty, but this warbler eats insects, especially small caterpillars. It typically forages for insects by gleaning foliage of dominant vegetation, particularly pinyon pine (Guzy and Lowther 1997).

## Conservation Status

### Species Assessment

DISTRIBUTION	4
THREATS	3
GLOBAL POPULATION SIZE	3
LOCAL POPULATION TREND	4
IMPORTANCE OF NEW MEXICO TO BREEDING	2
<b>COMBINED SCORE</b>	<b>16</b>

Black-throated Gray Warbler is Species Conservation Concern, Level 2 species for New Mexico, with a total assessment score of 16. It receives a high vulnerability score of 4 from PIF for its small non-breeding distribution, and from NMPIF for a negative local population trend.

### Population Size

Total population for state is unknown. PIF estimates a species population of 2,900,000, and that New Mexico holds about 3.5% of the species population, or slightly over 100,000 birds. Estimates of breeding

density include 24 singing males/40 ha in southeast Arizona oak-juniper woodland (Balda 1969); 9 territories on 40 ha in Utah pinyon-juniper woodland (Salamacha 1995); and 21 territories/40 ha in Utah pinyon-juniper woodland (Nettell 1994).

### Population Trend

Black-throated Gray Warbler is not extensively sampled by BBS in New Mexico. State trends based on a small number of routes are sharply and significantly negative, but less so since 1980. Rangewide population trends appear stable. BBS data for 1966-2004 are:

	Annual Trend (%)	P-value	Number of Routes
New Mexico	-5.7	0.02	11
FWS Region 2	-3.9	0.05	26
Western States	0.1	0.90	256

### Threats

Primary threats to Black-throated Gray Warbler are the loss or alteration of mid-elevation, mixed woodland or forest habitat. Removal of overstory trees in pinyon-juniper to enhance grazing opportunities may be detrimental (Sedgwick 1987). In New Mexico, large areas of pinyon-juniper woodlands have been cleared for livestock production, and reduced by both legal and illegal cutting for firewood. Losses of this habitat have continued in recent years due to widespread bark beetle infestation and persistent drought. These factors threaten to eliminate more of the state's pinyon-juniper habitat. Pine-oak habitat in southwest New Mexico may be vulnerable to catastrophic fire. In California and Oregon, Black-throated Gray Warblers show evidence of being able to occupy habitat in areas where forest structure has been severely altered by thinning or clear-cutting (Marcot 1985, Hager et al. 1996). However, these habitats are significantly different than the pinyon-juniper forests of New Mexico. The species is vulnerable to cowbird parasitism (Guzy and Lowther 1997). Fragmentation of pinyon-juniper habitat due to development, clearing for livestock, and bark beetle infestations could make them more vulnerable to cowbirds.

### Management Issues and Recommendations

Management for Black-throated Gray Warbler in New Mexico should focus on maintenance of large, mature stands of pinyon-juniper and Madrean pine-oak woodland habitat.

### **NMPIF Recommendations**

- Seek to limit habitat fragmentation in dense, canopied pinyon-juniper and pine-oak habitat.
- Eliminate chaining in dense, mature pinyon-juniper habitat.
- Encourage studies that will provide breeding density estimates in different regions and habitat types.

### **Species Conservation Objectives**

#### **PIF Objectives**

The PIF North American Landbird Conservation Plan places Black-throated Gray Warbler in the conservation action category Long-term Planning and Responsibility. It sets a population objective of maintaining or increasing the current population size over the next 30 years.

#### **NMPIF Objectives**

- Seek to maintain or increase the current population in New Mexico.
- Maintain density of 4 pairs per 100 ac in appropriate habitat in BCRs 16 and 34.
- Maintain presence in BCR 35.

### **Sources of Information**

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