

Juniper Titmouse (*Baeolophus ridgwayi*)

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

NMPIF assessment score: 19

NM stewardship responsibility: High

National PIF status: No special status

New Mexico BCRs: 16, 18, 34, 35

Primary breeding habitat(s): Pinyon-Juniper Woodland

Other habitats used: Madrean Pine-Oak Woodland

Summary of Concern

Juniper Titmouse is a species of pinyon-juniper woodlands of the intermountain region, with New Mexico holding a significant percentage of the species population. It has shown moderate to large population declines, mostly since 1980, particularly in New Mexico and Colorado.

Associated Species

Great Horned Owl, Gray Flycatcher, Plumbeous Vireo (SC2), Pinyon Jay (SC1), Western Scrub-Jay (SC2), Mountain Chickadee, Bushtit, White-breasted Nuthatch, Mountain Bluebird (SC2), Black-throated Gray Warbler (SC2), Black-headed Grosbeak

Distribution

Most of the range of the Juniper Titmouse lies within the five states of Nevada, Utah, Colorado, Arizona and New Mexico. The range extends west to eastern California and Oregon, north to southern Idaho and Wyoming, east to portions of west Oklahoma and Texas, and south into Sonora (Cicero 2000). The species may be found in foothills throughout the state, wherever pinyon-juniper or pine-oak woodland configurations exist. It is present in all four BCR portions of the state, least common in BCR 18 and perhaps most common in BCR 16.

Ecology and Habitat Requirements

Juniper Titmouse is a year-round resident and is mostly sedentary from summer to winter. It prefers open, mixed woodland areas at mid-elevations, and is most common where juniper is dominant (Cicero 2000). Few species are as closely tied to a single habitat type (Levad 1998). It may be present where pinyon-juniper is interspersed with oaks, and occurs in largely pine-oak habitat in southwest New Mexico. However, where Juniper Titmouse is sympatric with Bridled Titmouse, the two species segregate locally based on the distribution of oak (favored by Bridled) and pinyon-juniper (Cicero 2000, Gaddis 1987).

Juniper Titmouse requires large, mature trees that provide natural or woodpecker-excavated cavities for nesting and roosting. Nests are often placed in crevices in twisted trunks of mature junipers (Cicero 2000). In Utah, Juniper Titmouse preferred woodlands with high overstory cover and was associated with senescent trees (Paulacky and Anderson 2001). Local populations may be limited by availability of nest cavities (Cicero 1996). Cavity use for night roosting in winter increases fasting endurance and may be critical to annual survival (Cooper 1999).

The species mates for life and defends territories year-round. Population densities are generally much lower than those of the closely related (formerly considered conspecific) Oak Titmouse in California. Winter diet is made up of large seeds – pinyon nuts, juniper berries and acorns. Often these are transported to safe sites for processing (Christman 2001). Diet shifts to more arthropods in the spring and summer, though plant material remains important. Juniper Titmouse typically lays 6-7 eggs in a cavity nest lined with grass or weeds. Causes of nest failure include predation by scrub-jays and snakes (Cicero 2000).

Conservation Status

Species Assessment

DISTRIBUTION	3
THREATS	3
GLOBAL POPULATION SIZE	4
LOCAL POPULATION TREND	5
IMPORTANCE OF NEW MEXICO TO BREEDING	4
COMBINED SCORE	19

Juniper Titmouse is a Species Conservation Concern, Level 1 species for New Mexico, with a total assessment score of 19. It receives a high vulnerability score from PIF for its relatively small population

size, and a maximum score of 5 from NMPIF for its declining population trend statewide and regionally. This species also scores high for area importance.

Population Size

Total population for state is unknown. PIF estimates a species population of 330,000, with New Mexico holding 28% of the population, or about 98,000 birds. The percentage estimate shows that New Mexico has a very high stewardship responsibility for this species.

Population Trend

Juniper Titmouse has shown declining population trends in New Mexico and the southwest region, particularly since 1980. BBS data for routes classified as occurring in pinyon-juniper habitat also show a steep and statistically significant decline. BBS data for 1966-2004 are:

	Annual Trend (%)	P-value	Number of Routes
New Mexico	-2.7	0.06	25
FWS Region 2	-3.1	0.01	47
Western BBS	0.7	0.79	104
Pinyon-Juniper Habitat	-3.6	0.01	40

Threats

The main threats to Juniper Titmouse breeding in New Mexico are conversion of woodland habitat to rangeland, removal of mature and senescent trees in pinyon-juniper habitat, and overall decline of this habitat due to drought and beetle infestation. Removal of woodland by chaining has dramatic effects on breeding bird populations (Sedgwick and Ryder 1987). Habitat may be degraded by poorly planned woodland thinning and tree removal efforts, including the removal of all dead or dying trees in areas of beetle infestation and associated die-off.

Management Issues and Recommendations

Management for Juniper Titmouse in New Mexico should focus on the preservation of mature stands of pinyon-juniper woodland with structural diversity, including the presence of large and senescent trees.

NMPIF Recommendations

- Minimize cutting or clearing of healthy, mature pinyon-juniper habitat.
- Maintain pinyon-juniper woodland habitat with a mixed size and age distribution of trees.
- Avoid harvesting or removal of large trees or snags that may provide nesting and roosting cavities.
- Avoid wholesale cutting and removal of drought/beetle killed trees.

Species Conservation Objectives

NMPIF Objectives

- Seek to stop or reverse downward trends in Juniper Titmouse populations.
- Seek to better understand reasons for recent declines.
- Monitor Juniper Titmouse populations in different regions of the state.

Sources of Information

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