

Red-faced Warbler (*Cardellina rubrifrons*)

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

NMPIF assessment score: 18

NM stewardship responsibility: Moderate

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

BCRs: 34, 35, (16)

Primary breeding habitat(s): Mixed Conifer Forest, Ponderosa Pine Forest

Other habitats used: Montane Riparian

Summary of Concern

Red-faced Warbler occurs near the northern periphery of its breeding range in southern and central New Mexico. State populations are vulnerable to disturbance or loss of favored montane forest and riparian habitat, inappropriate grazing practices, and interrupted fire regimes.

Associated Species

Whip-poor-will (BC2), Broad-tailed Hummingbird (SC2), Cordilleran Flycatcher (SC2), Violet-green Swallow, Mexican Chickadee (BC2), Red-breasted Nuthatch, Hermit Thrush, Olive Warbler (BC2), Yellow-eyed Junco (BC1).

Distribution

Red-faced Warbler is primarily distributed in northwestern Mexican and the southwestern United States, reaching the northern limit of its range in northern Arizona and central New Mexico. Irregular or occasional sightings occur in southern California and Nevada, and west Texas. In Mexico, its breeding range extends south to southern portions of Durango; it winters from northern Durango and Sinaloa south to Central America.

In New Mexico, Red-faced Warblers occur in the southern and west-central mountains, throughout the Mogollon Rim (where it is most common) and southern sky island ranges, and east to the Sacramento Mountains. The breeding range extends north to the San Mateo and Magdalena mountains, and less regularly into southernmost areas of BCR 16, including the Gallinas and Zuni mountains.

Ecology and Habitat Requirements

Red-faced Warblers breed in moderate- to high-elevation (6500 to 9000 feet) conifer forests. Main habitat types in New Mexico are mixed conifer and ponderosa pine forests of the southern mountains, typically with a Gambel oak or other deciduous tree component. The species often occurs in or around drainages with montane riparian vegetation, and along the base of steep slopes in shaded canyon bottoms (Martin and Barber 1995). In the Mogollon Mountains, it was common in fir forest, where it seems to require stands of short-needled coniferous trees with a mixture of deciduous trees or shrubs and a fairly well-developed ground cover (Hubbard 1965)

The species typically nests in a small hole or scrape on the ground, often with an overhanging rock, log or grass clump for concealment. In northern Arizona, most nests were found away from dense woody vegetation. Nests are often placed among forbs on rocky slopes (31%), or at the base of small fir (27%) or maple (26%) trees. Areas near pines or New Mexico locust, which are preferred sites for other ground-nesting species, are avoided (Martin 1993). Red-faced Warblers seem to prefer forest areas of mixed age, density and vertical structure. They are sensitive to habitat disturbance, and have disappeared from breeding areas where selective logging has taken place (Franzreb 1977, Szaro and Balda 1979).

The Red-faced Warbler is a short distance migrant, moving through the mountains of central and western Mexico. Birds arrive in New Mexico from mid-April to mid-May, and depart by late August or early September. Clutch size is typically four or five. They often re-nest after a failed nest attempt, but raise only one brood per year. Diet is primarily insects. In Arizona, Red-faced Warblers foraged almost exclusively in firs and pines in one study, and in firs and maples in another (Franzreb and Franzreb 1983, Martin and Barber 1995).

Conservation Status

Species Assessment

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

COMBINED SCORE	18
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Red-faced Warbler is a Species Conservation Concern, Level 1 species for New Mexico, with a total assessment score of 18. Red-faced Warbler is a national PIF Watch List species, and a Stewardship species for the Southwest Avifaunal Biome. It receives a maximum vulnerability score of 5 from PIF for its small breeding and non-breeding distribution, and a 4 for small population size.

Population Size

Size of the New Mexico population is unknown. PIF estimates a species population of 380,000, and that New Mexico holds about 13% of the species population, or about 50,000 birds. However, this estimate is believed to be high. This species is poorly sampled by the BBS in New Mexico.

Population Trend

Trends for this species are unknown, and BBS coverage is almost non-existent. Local declines are likely where habitat has been disturbed. NMPIF assigns a score of 3 for local population trend, indicating uncertainty.

Threats

The main threats to Red-faced Warblers breeding in New Mexico are loss or degradation of breeding habitat, due to timber harvesting, inappropriate grazing practices, or catastrophic fire. In one Arizona study, along a gradient of disturbed forest plots that included clearcut and selectively logged areas, Red-faced Warblers were restricted to untouched (control) plots. Selective logging resulted in disappearance from formerly occupied habitat (Szaro and Balda 1979). Excessive grazing in montane riparian areas may also reduce habitat quality. Nesting Red-faced Warblers are also sensitive to human disturbance (Martin and Barber 1995).

Management Issues and Recommendations

Management for Red-faced Warblers in New Mexico should focus on protection of mixed conifer and montane riparian habitat in the southwest portion of the state, particularly in the Gila, Apache, and Cibola National Forests.

NMPIF Recommendations

- Prevent any further loss of habitat in known population areas.
- Maintain mixed conifer and ponderosa pine habitats with a mixed size and age distribution of trees and an oak understory.
- Avoid timber harvesting in canyon or drainage bottoms and along the base of forested slopes.
- Protect montane riparian areas from overgrazing.

Species Conservation Objectives

PIF Objectives

The PIF North American Landbird Conservation Plan designates Red-faced Warbler as a Long-term Planning and Responsibility species, and sets an objective of maintaining the present species population over the next 30 years.

NMPIF Objectives

- Establish a monitoring program to determine the status and trends of Red-faced Warbler in New Mexico.
- Increase populations in the Sacramento and Gallinas mountains through habitat protection and enhancement.
- Maintain a density of 2 pairs/40 ha in suitable habitat in the Mogollon Rim and the Animas Mountains.

Sources of Information

Franzreb, K. E. 1977. Bird population changes after timber harvesting in a mixed conifer forest in Arizona. USDA Forest Service Research Paper RM-184. Rocky Mtn. Forest and Range Exp. Stn., Fort Collins, CO.

Franzreb, K. E., and B. J. Franzreb. 1983. Foraging ecology of the Red-faced Warbler during the breeding season. *Western Birds* 14:31-38.

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Szaro, R. C., and R. P. Balda. 1979. Bird community dynamics in ponderosa pine forest. *Stud. Avian Biol.* No. 3.