

## **Whip-poor-will (*Caprimulgus vociferus*)**

NMPIF level: Biodiversity Conservation Concern, Level 2 (BC2)

NMPIF assessment score: 13

NM stewardship responsibility: Low

National PIF status: No special status

New Mexico BCRs: 16, 34, 35

Primary breeding habitat(s): Ponderosa Pine Forest

Other habitats used: Mixed Conifer Forest, Madrean Pine-Oak Woodland

### **Summary of Concern**

Little is known about the present status of this summer resident of southern New Mexico mountains. Long-term declines in other parts of its broad geographic range indicate that the population bears monitoring and increased study. The western subspecies may warrant specific status, and may be of higher conservation concern.

### **Associated Species**

Band-tailed Pigeon (SC2), Flammulated Owl (SC1), Mexican Spotted Owl (SC1), Magnificent Hummingbird (BC2), Acorn Woodpecker, Dusky Flycatcher, Pygmy Nuthatch, Hutton's Vireo, Virginia's Warbler (SC1), Black-throated Gray Warbler (SC2), Grace's Warbler (SC1), Hepatic Tanager, Spotted Towhee, Dark-eyed Junco

### **Distribution**

The eastern subspecies of the Whip-poor-will breeds throughout the eastern United States and southern Canada. The western subspecies breeds primarily in southern portions of Arizona and New Mexico, locally as far west as California and Nevada. Western breeding populations occur further south in highland areas, becoming resident in central Mexico and extending south to Central America (Cink 2002).

In New Mexico, Whip-poor-will is a summer resident of montane forests in the south, extending north to the Mogollon, Magdalena, Sacramento and Guadalupe mountains (Parmeter et al. 2002). Less frequent

breeding occurs in the Manzanos and Sandias (Hubbard 1978), and the breeding range may extend further north in the Zunis and Sangre de Cristos.

### Ecology and Habitat Requirements

Because of its cryptic and elusive nature, the Whip-poor-will remains one of the least-studied bird species in the United States, and most information comes from the eastern part of the country. In Mexico and the southwestern United States, Whip-poor-wills tend to occupy humid to semiarid pine and pine-oak forest (Howell and Webb 1995). In New Mexico, the species prefers ponderosa pine and pine-oak woodlands. Unlike eastern populations, Whip-poor-wills in the southwest show greater affinity for densely wooded areas including forested canyons (Marshall 1957, Ligon 1961). A forest canopy of greater than 40% has been suggested as a critical component of their habitat (Zwartjes et al. 2005).

Whip-poor-wills are present in New Mexico from late April through September. In Arizona, the species remains into early October with a few later dates in the southern mountains (Monson and Phillips 1981). Clutches of two eggs are laid directly onto leaf litter on the forest floor, and often are partly shaded by nearby shrubs or overhanging rocks. Two broods per season may be raised. Both males and females show a high degree of fidelity to previously used nest areas and sites (Cink 2002).

### Conservation Status

#### Species Assessment

DISTRIBUTION	3
THREATS	3
GLOBAL POPULATION SIZE	3
LOCAL POPULATION TREND	3
IMPORTANCE OF NEW MEXICO TO BREEDING	1
<b>COMBINED SCORE</b>	<b>13</b>

Whip-poor-will is a Biodiversity Conservation Concern, Level 2 species for New Mexico, with a total assessment score of 13. Vulnerability scores of 3 indicate a lack of adequate knowledge regarding current population status and trends. The western subspecies of Whip-poor-will may warrant recognition as a separate species. Scores for Importance of New Mexico to Breeding and Distribution would probably be higher for this taxon evaluated alone. Whip-poor-will is a U.S. Fish and Wildlife Service (2002) national Bird of Conservation Concern.

## Population Size

Total population for New Mexico is unknown. PIF estimates a species population of 2,100,000, and that New Mexico holds less than one percent of the species population.

## Population Trend

BBS data show moderate and statistically significant long-term declines range-wide, but much of the data is for the eastern subspecies. Declines in the west may be sharper, but sampling for southwestern populations is very limited. Very limited data exist for the species in New Mexico. BBS data for 1966-2004 are:

	Annual Trend (%)	P-value	Number of Routes
FWS Region 2	-7.9	0.03	9
Survey-wide	-2.3	0.00	482

## Threats

Threats to this species are poorly understood. Decreases in some areas have been attributed to habitat loss to agriculture. Whip-poor-will also may be vulnerable to forest fragmentation, avoiding smaller and more isolated habitat patches (Reese 1996). In eastern Kansas, the species is now completely absent from previously occupied grazed woodlands, suggesting that grazing may be a negative influence (Cink 2002). In the west, overgrazing the shrub and herbaceous layers of pine-oak woodland may cause a loss of prey base (Zwartjes et al 2005).

## Management Issues and Recommendations

Effective management for Whip-poor-will in New Mexico will require greater knowledge of species habitat requirements and population status. Efforts should focus on maintaining or creating the mixed forest structure favored by the western subspecies.

## NMPIF Recommendations

- Maintain a heterogeneous structure in heavily wooded canyons with a >40% canopy closure, an oak mid-story and well-developed herbaceous understory.

## Species Conservation Objectives

### NMPIF Objectives

- Devise and carry out surveys to assess the presence and status of this species in major mountain ranges of New Mexico.
- Increase present knowledge of habitat requirements, and likely responses to changes in forest structure and configuration.
- Seek to maintain or increase the present population.

### Sources of Information

Cink, C. L. 2002. Whip-poor-will (*Caprimulgus vociferus*). In *The Birds of North America*, No. 620 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Howell, S. N. G., and S. Webb. 1995. *A guide to the birds of Mexico and northern Central America*. Oxford Univ. Press, New York.

Hubbard, J. P. 1978. Revised check-list of the birds of New Mexico. *N.M. Ornithol. Soc. Publ.* 6:99.

Ligon, J. S. 1961. *New Mexico birds*. Univ. of New Mexico Press, Albuquerque, NM.

Marshall, J. T. 1957. Birds of pine-oak woodland in southern Arizona and adjacent Mexico. *Pac. Coast Avifauna* No. 32.

Monson, G., and A. R. Phillips. 1981. *Annotated checklist of the birds of Arizona*. 2nd ed. Univ. of Arizona Press, Tucson, AZ.

Parmeter, J., B. Neville, and D. Emkalns. 2002. *New Mexico bird finding guide*. New Mexico Ornithological Society, Albuquerque, NM.

Reese, J. G. 1996. Whip-poor-will. Pp. 194–195 in *Atlas of the breeding birds of Maryland and the District of Columbia* (C. S. Robbins, ed.). Univ. of Pittsburgh Press, Pittsburgh, PA.

U.S. Fish and Wildlife Service. 2002. *Birds of conservation concern 2002*. Division of Migratory Bird Management, Arlington, VA. 99 p.

Zwartjes, P. W., J. E. Cartron, P. L. Stoleson, W. G. Haussamen, and T. E. Crane. 2005. Assessment of native species and ungulate grazing in the southwest. *Terrestrial wildlife*. RMRS-GTR-142. Fort Collins, CO. USDA-Forest Service, Rocky Mountain Research Station, 74 pp.