

Whiskered Screech-Owl (*Megascops trichopsis*)

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

NMPIF assessment score: 14

National PIF status: No special status

NM stewardship responsibility: Low

New Mexico BCRs: 34

Primary breeding habitat(s): Madrean Pine-Oak Woodland, Southwest Riparian, Montane Riparian

Summary of Concern

Whiskered Screech-Owl is a species of the Mexican and Central American highlands, with a limited population extending into the southwestern United States. The small New Mexico population is limited to dense oak and pine-oak woodlands in a few canyon bottoms and slopes of the Peloncillo Mountains.

Associated Species

Northern Pygmy-Owl (SC2), Western Screech-Owl, Whip-poor-will (BC2), Elegant Trogon (BC2), Acorn Woodpecker, Buff-breasted Flycatcher, Cassin's Kingbird (SC2), Mexican Jay (BC2), Black-throated Gray Warbler (SC2), Hepatic Tanager, Black-headed Grosbeak

Distribution

Whiskered Screech-Owl is resident from the uplands of Central America north through the principal mountain regions of Mexico, except for northern portions of the Sierra Madre Oriental. Its range extends into the United States only in southeast Arizona and southwest New Mexico.

In New Mexico, Whiskered Screech-Owls are known to be resident only in canyons of the Peloncillo Mountains, in south Hidalgo County. The species has also been recorded in the Animas Mountains; current status there is unknown.

Ecology and Habitat Requirements

Whiskered Screech-Owls occupy canyon areas in montane forests. In Arizona, this species occurs across a habitat gradient from lower riparian terraces, dominated by Arizona sycamore, Arizona walnut, alligator juniper and several species of oak, to evergreen woodland on canyon sides dominated by Chihuahua and Apache pine, Emory and Arizona white oak, and alligator juniper (Marshall 1957, Gehlbach and Gehlbach 2000). Average vegetation structure in 5 optimum riparian nesting areas in Arizona is 1,345 trees/ha, 29 cm diameter at breast height, 13 m high with an estimated 39 tree cavities/ha (Gehlbach and Gehlbach 2000). In New Mexico, most of the locations in the Peloncillo Mountains where the species has been found do not contain sycamores (S. Williams, personal communication). Nesting habitat in the Peloncillo Mountains contains gray oak, Chihuahua pine, alligator juniper, border pinyon, and Emory oak. Here the species particularly favors dense oak and pine-oak woodlands of canyon bottoms and adjacent slopes (Williams 1999, Gehlbach and Gehlbach 2000).

Whiskered Screech-Owls are secondary cavity nesters and share habitat with a number of other avian cavity nesters, including other screech-owls, Elf Owls, pygmy-owls, Elegant Trogons, and woodpeckers. Territory establishment and singing begins in late January. A clutch of 2-4 eggs is laid from March to May. Nests may occur in natural cavities or in drilled holes of Northern Flicker-size or larger, sometimes enlarged by squirrels. In optimal habitat in Arizona, sycamores constitute 12–30% of the trees, 70% of which have potentially suitable cavities; in suboptimal habitat, sycamores make up <6% of the trees (Gehlbach and Gehlbach 2000). In the Peloncillo Mountains, Whiskered Screech-Owls nest in canyon bottoms, as well as slopes, and often nest in oaks from 17-23 ft high (Williams 1999). Potential sites include areas where drainages merge with a main canyon (S. Williams, personal communication). Nest boxes may be used.

Conservation Status

Species Assessment

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|--------------------------------------|-----------|
| DISTRIBUTION | 4 |
| THREATS | 3 |
| GLOBAL POPULATION SIZE | 4 |
| LOCAL POPULATION TREND | 2 |
| IMPORTANCE OF NEW MEXICO TO BREEDING | 1 |
| COMBINED SCORE | 14 |

Whiskered Screech-Owl is a Biodiversity Conservation Concern, Level 2 species for New Mexico, with a combined vulnerability score of 14. At the continental level, it receives high PIF vulnerability scores of 4 for its relatively small distributional range and population size. In the state of New Mexico, Whiskered Screech-Owl is listed as threatened by New Mexico Department of Game and Fish.

Population Size

PIF estimates a species population of 200,000, less than 5% of which occurs in the United States. Breeding populations in southeast Arizona averaged 2.6–7.8 pairs/km² in riparian forest and evergreen woodland at 1,400–2,150 m (Gehlbach and Gehlbach 2000). Densities are higher in the Sierra Madre Occidental. In New Mexico, the population in surveyed canyons in the Peloncillo Mountains numbers some 20-25 pairs (S. Williams, personal communication). As of 2008, other canyons with presumably suitable habitat remain to be surveyed.

Population Trend

This species is not sampled by BBS, and limited trend data are available. Gehlbach and Gehlbach (2000) note an expansion, recolonization, or substantial population increase in the Peloncillo Mountains between 1955 and 1970, and suggest Sierra Madre Occidental populations as a possible source. In recent years, the New Mexico population generally has been stable or increasing.

Threats

Fire is a potential threat to the species in the Peloncillo Mountains, through direct loss of nest cavities and alteration of dense woodlands, creating conditions more suitable for Western Screech-Owl (S. Williams, personal communication). Burning canyon bottoms and riparian areas in this region will be detrimental to Whiskered Screech-Owl, and other species, and should be prevented. Fire protection, resulting in considerable thickening of woodland and forest growth, has benefited Whiskered Screech-Owl, and the species will continue to abound wherever dense vegetation is allowed to remain on steep north-facing slopes and shady canyon bottoms (Marshall 1967).

In Arizona, outdoor recreational development (e.g., campgrounds, roads, and trails) renders nest sites more accessible to birders and other eco-tourists, thereby increasing the potential for negative impacts associated with repeated disturbance (Gehlbach and Gehlbach 2000). The use of tape recordings, strong lights, or attempting to induce an appearance by owls at the nest tree, all may disrupt nesting activity and negatively affect local populations.

Management Issues and Recommendations

Management for Whiskered Screech-Owl in New Mexico should focus on maintaining suitable nesting habitat and minimizing disturbance in Peloncillo Mountains canyons.

NMPIF Recommendations

- Seek to avoid disturbance or degradation of habitat in known breeding areas.
- Avoid performing prescribed burns in canyon bottoms within the New Mexico range of Whiskered Screech-Owl.
- Discourage construction of new roads in the Peloncillo Mountains.

Species Conservation Objectives

NMPIF Objectives

- Maintain dense woodland habitat on canyon bottoms and slopes in the Peloncillo Mountains.
- Maintain a population of at least 20-25 pairs in known nesting areas.
- Document presence of Whiskered Screech-Owls in other potentially suitable sites in southwestern New Mexico.

Sources of Information

Gehlbach, F. R., and N. Y. Gehlbach. 2000. Whiskered Screech-Owl (*Otus trichopsis*). In *The Birds of North America*, No. 507 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

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Marshall, J. T., Jr. 1967. Parallel variation in North and Middle American Screech-Owls. *Monogr. West. Found. Vert. Zool.* 1:1-72.

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