

Varied Bunting (*Passerina versicolor*)

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

NMPIF assessment score: 13

NM stewardship responsibility: Low

National PIF status: Watch List

New Mexico BCRs: 34, 35

Primary breeding habitat(s): Chihuahuan Desert Shrub

Other habitats used: Southwest Riparian

Summary of Concern

Varied Bunting is an arid land species which frequents desert canyons, thorn-scrub, and riparian edge habitats within the extreme southern portion of New Mexico. Very small breeding populations exist at three locations in southern New Mexico within Hidalgo, Dona Ana, and Eddy Counties.

Associated Species

Gambel's Quail, Broad-billed Hummingbird (BC2), Black-chinned Hummingbird (SC2), Ladder-backed Woodpecker, Bell's Vireo (SC1), Gray Vireo (SC1), Bewick's Wren, Black-chinned Sparrow (SC1)

Distribution

Varied Bunting occurs across most of interior Mexico south to Guatemala. Its breeding range extends north into extreme southern Texas, southeast and southwest New Mexico, and southern Arizona. The species is partly migratory, with northern and interior populations withdrawing south and into coastal regions in winter.

In New Mexico, Varied Buntings occur at Guadalupe Canyon in Hidalgo County, and also less regularly in Dona Ana County and in canyons of Carlsbad Caverns National Park (Groschupf and Thompson 1998, Parmeter et al. 2002). At this latter location, results of surveys in 2003 detected presence of buntings in five canyons, indicating that there were a larger number within Eddy County than previously known.

Ecology and Habitat Requirements

Varied Buntings occur in brushy desert canyons and along washes and riparian edges, and less commonly in open desert with dense vegetation (Lockwood 1995, Groschupf and Thompson 1998). In Arizona, the species occurs along ephemeral desert streams with dense vegetation of mesquite, oak, willow, and net-leaf hackberry, adjacent to hills with dense thorny vegetation and abundant annual grasses. In Texas, habitat includes thickets of acacia, oak, and juniper. This species avoids residential areas with non-native habitat (Groschupf and Thompson 1998).

This species arrives relatively late in New Mexico, often in late May. In Arizona, egg-laying coincides with the arrival of the first summer monsoon storms, often not until mid-July or August. Nests are built near the outer edge of thorny shrubs, 2-8 feet off the ground, shaded from above. Nest shrubs may be located along washes or on slopes of dense shrubby vegetation (Groschupf and Thompson 1998).

Conservation Status

Species Assessment

DISTRIBUTION	4
THREATS	3
GLOBAL POPULATION SIZE	3
LOCAL POPULATION TREND	2
IMPORTANCE OF NEW MEXICO TO BREEDING	1
COMBINED SCORE	13

Varied Bunting is a Biodiversity Conservation Concern, Level 2 species for New Mexico, with a total assessment score of 13. It receives a high vulnerability score of 4 from PIF for its relatively small non-breeding distribution. PIF also gives this species a 4 for population trend, which helps raise Varied Bunting to Watch List status nationally; the small New Mexico population appears to be stable.

Population Size

PIF estimates a species population of 2 million, less than 5% of which occurs in the United States. Size of the New Mexico population is unknown, but very small. In the 1990s, an average of three breeding pairs was present at Guadalupe Canyon annually. Unknown scattered populations may exist in remote

canyons adjacent to known sites, but the total population for the state may remain unknown until a systematic survey is conducted.

Population Trend

Almost no BBS data exist for this species, and trends are uncertain. NMPIF assigns a score of 2, indicating a stable or moderately increasing local population trend, by expert opinion.

Threats

Varied Bunting is susceptible to cowbird parasitism, though it is not known whether this represents a serious problem. Parasitized nests have been found at Guadalupe Canyon, where only a few pairs breed each year. In this area, any parasitism may have an effect on the local population. Varied Bunting in New Mexico is considered vulnerable due to its small population size. The species is threatened by alteration or loss of dense desert scrub habitat, which may come about due to grazing, mining, or residential development (Groschupf and Thompson 1998).

Management Issues and Recommendations

Management for Varied Bunting in New Mexico should focus on retaining large, dense patches of Chihuahuan desert shrub vegetation and adjacent riparian habitat in locations where breeding populations are known.

NMPIF Recommendations

- Maintain dense arroyo riparian vegetation, especially in areas closely surrounded by canyon walls or hillsides.
- Maintain tall, dense grasses on hillsides, in canyons or draws where dense riparian vegetation is present.
- Maintain structure of habitat in known areas of occurrence.
- Monitor known populations and survey for and document new populations.

Species Conservation Objectives

PIF Objectives

The PIF North American Landbird Conservation Plan places Varied Bunting in the conservation action category of Management, and sets a continental population objective of increasing the current population by 50% over the next 30 years.

NMPIF Objectives

- Maintain or increase known populations in Guadalupe Canyon, the San Andres Mountains, and Carlsbad Caverns National Park.

Sources of Information

Groschupf, K. D., and C. W. Thompson. 1998. Varied Bunting (*Passerina versicolor*). In *The Birds of North America*, No. 351 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Lockwood, M. W. 1995. A closer look: Varied Bunting. *Birding* 27:110–113.

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