

Broad-tailed Hummingbird (*Selasphorus platycercus*)

NMPIF level: Species Conservation Concern, Level 2 (SC2)

NMPIF assessment score: 15

NM stewardship responsibility: High

National PIF status: No special status

New Mexico BCRs: 16, 34, 35

Primary breeding habitat(s): Spruce-Fir Forest, Mixed Conifer Fir, Ponderosa Pine Forest, Pinyon-Juniper Woodland, Montane Riparian, Wet Meadows/Montane Grassland

Summary of Concern

Broad-tailed Hummingbird is the major breeding hummingbird of higher elevations in the Intermountain West, and is an important pollinator for many montane flowering plants. The population appears to be slightly decreasing rangewide, and is susceptible to disturbance or changes in breeding habitat, including pinyon-juniper woodlands, mixed conifer forests and montane riparian areas. Although the New Mexico population appears to be stable or even increasing slightly, the high percentage of the global population that breeds in the state makes it a conservation priority.

Associated Species

Dusky Grouse (BC2), Hairy Woodpecker, Western Wood-Pewee, Cordilleran Flycatcher (SC2), Plumbeous Vireo (SC2), Mountain Chickadee, Mountain Bluebird (SC2), Virginia's Warbler (SC1), MacGillivray's Warbler

Distribution

Broad-tailed Hummingbird breeds in mountains throughout the interior western United States from Idaho and western Wyoming south through Colorado, Utah, Nevada, east-central California, Arizona, New Mexico, and western Texas; and south through Mexico to eastern Guatemala (Calder and Calder 1992).

In New Mexico, the species breeds in mountain ranges nearly statewide, mainly above 6,000 feet. It is a rare to uncommon migrant through lowlands, being least numerous on the eastern plains (Parmeter et al. 2002).

Ecology and Habitat Requirements

Across its range, Broad-tailed Hummingbirds occupy many different vegetation types. It is generally associated with open woodlands, especially pinyon-juniper and pine-oak associations, as well as montane riparian areas and wet meadows, and areas of relatively open mixed conifers including fir, spruce, and pine (Calder and Calder 1992). In Colorado, although breeding bird atlasers recorded Broad-tailed Hummingbirds in ponderosa pine forest, it was recorded in higher densities and more frequently in areas dominated by aspen. Reports in foothill riparian, montane shrubland, and pinyon-juniper woodland also outnumbered ponderosa pine, but there is no indication of the quality of the ponderosa pine stands where breeding season observations were reported. Breeding was confirmed up to around 3,320 meters (10,300 feet) in elevation (Kingery 1998). Likewise, in New Mexico, the species also uses a variety of habitats, including pinyon-juniper woodlands, montane riparian areas and thickets, and open, mixed conifer forests. Surprisingly little research on this species has occurred over the past 20 years, and more specific data on habitat preference in New Mexico are lacking.

Broad-tailed Hummingbirds are present in New Mexico from early April through September (Parmeter et al. 2002). Nesting is correlated with the flowering times of major nectar sources (Waser 1976). Nest site and construction favor energy conservation, with overhanging branches and crooks in trunks most often used (Calder and Calder 1992). In conifers, nests are often on low branches 0.3 to 1.5 m above ground or hanging out over streams. In deciduous trees, nests are usually placed near the base of the canopy. Clutch size is almost always 2, with a range of 1 to 3. Second clutches are apparently rare, especially at higher elevations where the flowering season is short. Diet consists primarily of floral nectar and small insects. Broad-tailed Hummingbirds will take advantage of sugar water feeders when available.

Conservation Status

Species Assessment

| | |
|------------------------|---|
| DISTRIBUTION | 5 |
| THREATS | 2 |
| GLOBAL POPULATION SIZE | 3 |
| LOCAL POPULATION TREND | 2 |

| | |
|--------------------------------------|-----------|
| IMPORTANCE OF NEW MEXICO TO BREEDING | 3 |
| COMBINED SCORE | 15 |

Broad-tailed Hummingbird is a Species Conservation Concern, Level 2 species for New Mexico, with a total assessment score of 15. At the continental level, it receives maximum PIF vulnerability scores of 5 for its very small non-breeding distribution.

Population Size

PIF estimates a total species population of 4 million, 80% of which breeds in the United States. The New Mexico population is estimated at about 700,000, or 17.1% of the global population. In the Colorado Rockies, densities were 1.1 birds/ha (Calder and Calder 1992). Density information is lacking for New Mexico.

Population Trend

BBS data indicate that the United States population may be experiencing a slight decrease. In New Mexico, the population appears to be stable. BBS data for 1966-2006 are:

| | Annual Trend (%) | P-value | Number of Routes |
|----------------|------------------|---------|------------------|
| New Mexico | 0.6 | 0.69 | 24 |
| FWS Region 2 | 0.1 | 0.90 | 45 |
| Western States | -0.4 | 0.49 | 193 |

Threats

Broad-tailed Hummingbird is susceptible to habitat disturbance due to human activity or fire. These disturbances can impact both the breeding habitat and food supply of the species. Electric livestock fences can be a hazard because red plastic insulators attract the species, which may result in electrocution (Calder and Calder 1992). Zwartjes et al. (2005) reviewed studies finding no difference in hummingbird abundance in grazed versus ungrazed riparian areas but cautioned that grazing, which would reduce flowers, may degrade the food base for this species. They noted that flower failure is known to cause abandonment of chicks. Additionally, experts noted that removal of deciduous shrubs and fire suppression, resulting in woody invasion of open areas, would be detrimental to hummingbird persistence.

Management Issues and Recommendations

NMPIF Recommendations

- Encourage future research of this species to increase the knowledge base regarding its ecological requirements.
- Manage grazing as necessary to avoid the over-exploitation of flowering plants and riparian shrubs, and to protect riparian nesting and display habitat.
- Maintain appropriate fire regimes in ponderosa pine and other forests to ensure open grassy areas and high forb production.

Species Conservation Objectives

NMPIF Objectives

- Maintain or increase the current breeding population.

Sources of Information

Calder, W. A. and L. L. Calder. 1992. Broad-tailed Hummingbird (*Selasphorus platycercus*). In *The Birds of North America*, No. 16 (A. Poole, P. Stettenheim, and F Gill, eds.). Philadelphia, PA: The Academy of Natural Sciences; Washington, D.C: The American Ornithologists Union.

Kingery, H. E. (Ed.) 1998. Colorado breeding bird atlas. Colorado Bird Atlas Partnership, Colorado Division of Wildlife, Colorado Springs, CO.

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

Waser, N. M. 1976. Food supply and nest timing of the Broad-tailed Hummingbird in the Rocky Mountains. *Condor* 78:133-135.

Zwartjes, P. W., J. E. Cartron, P. L. Stoleson, W. C. Haussamen, T. E. Crane. 2005. Assessment of native species and ungulate grazing in the southwest: terrestrial wildlife. Gen. Tech. Rep. RMRS-GTR-142. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fort Collins, CO.