Brown-capped Rosy-Finch (*Leucosticte australis*)

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

NMPIF assessment score: 17

NM stewardship responsibility: Low

National PIF status: Watch List, Stewardship (Intermountain West region)

New Mexico BCRs: 16

Primary breeding habitat(s): Alpine/Tundra

Other habitats used: Associated Cliff/Cave/Rock areas

Summary of Concern

Brown-capped Rosy-Finch is largely endemic to Colorado, with a small breeding population in northern New Mexico. It breeds in remote high-elevation habitats but is vulnerable due to its highly restricted range and population size, and possible future shrinkage of above-timberline habitat with permanent or late-melting snowfields.

Associated Species

None

Distribution

Brown-capped Rosy-Finch is endemic to the southern Rocky Mountains region of the United States. It is largely restricted to the high mountains of Colorado and northern New Mexico, extending north just into southern Wyoming. This species breeds at high elevations and winters in the same general area, sometimes descending to lower elevation parklands and foothill areas (Johnson et al. 2000).

In New Mexico, Brown-capped Rosy-Finches are known to breed only in the northern Sangre de Cristo Mountains, from Wheeler Peak and Lake Peak north (Hendricks 1977). They winter as far south as the Sandia Mountains near Albuquerque.

Ecology and Habitat Requirements

Brown-capped Rosy-Finches spend summer entirely above timberline, in areas where caves, cliffs and rock slides are present. Most nesting occurs on cliffs or rock slides overlooking snow field areas, which are important for feeding. Alpine tundra and fell fields are also important feeding areas, but glaciers or snow fields may be a required feature for nest site selection. This species is generally absent from areas of extensive tundra where rock features and snow are not present. It sometimes occurs on mountains whose summits are below timberline, and in small enclaves where slope and aspect produce a rocky alpine habitat (Hendricks 1977, Johnson et al. 2000). It generally remains in open areas at high elevations during winter, but is somewhat nomadic and may descend to lower elevations during severe weather, often flocking with other rosy-finch species.

Breeding activities take place from mid-June through the end of August. Nests of woven grass and other plant materials are built in variety of sites, most frequently in holes, fissures or cliff ledges, or under large rocks on rocky slopes. Most nests have some feature providing overhead protection from falling rocks, rain and hail, and aerial nest predators including Clark's Nutcracker and Prairie Falcon. Brown-capped Rosy-Finches forage for insects frozen on the surface of snowfields, and on seeds exposed along the retreating margins of the snow (Yanishevsky and Petring-Rupp 1998, Johnson et al. 2000).

Conservation Status

Species Assessment

DISTRIBUTION	5
THREATS	3
GLOBAL POPULATION SIZE	5
LOCAL POPULATION TREND	3
IMPORTANCE OF NEW MEXICO TO BREEDING	1
COMBINED SCORE	**17**

Brown-capped Rosy-Finch is a Biodiversity Conservation Concern, Level 2 species for New Mexico, with a total assessment score of 17. At the continental level, it receives maximum PIF vulnerability scores of 5 for its very small distributional range and population size. It is a national PIF Watch List species.

Population Size

PIF estimates a species population of 45,000. The Colorado Breeding Bird Atlas project mid-range estimate is 19,184 pairs in Colorado (Kingery 1998). Size of the New Mexico breeding population is unknown, but considered very small.

Population Trend

This high-elevation species is not sampled by BBS. Christmas Bird Count data from Colorado show some evidence of declines, but this may be an artifact of nomadic flock movements coupled with a small sample size (Johnson et al. 2000). NMPIF assigns a score of 3, indicating that local population trends are uncertain.

Threats

Brown-capped Rosy-Finches breed in remote areas and are not heavily impacted by human activities. The species is probably not affected by grazing. Recreational activities could disrupt nesting in some locations, but probably do not pose a significant threat. This species uses feeders in winter and may benefit to some degree by increasing residential development in foothill and mountain areas (Johnson et al. 2000). The greatest threat to this species in New Mexico is the possible upward movement of tree line predicted under global-warming scenarios, which could lead to increased habitat fragmentation and loss of some populations (Romme and Turner 1991).

Management Issues and Recommendations

Few management options exist for this species.

NMPIF Recommendations

- Assess current breeding population status.
- Monitor to determine if breeding populations are being adversely affected by recreational or other human land uses.

Species Conservation Objectives

PIF Objectives

The PIF North American Landbird Conservation Plan places Brown-capped Rosy-Finch in the conservation action category Long-term Planning and Responsibility and sets a continental population objective of maintaining or increasing the current population over the next 30 years.

NMPIF Objectives

- Maintain or increase the current population in the northern Sangre de Cristo Mountains.

Sources of Information

Hendricks, D. P. 1977. Brown-capped Rosy Finch nesting in New Mexico. Auk 94:384-385.

Johnson, R. E., P. Hendricks, D. L. Pattie, and K. B. Hunter. 2000. Brown-capped Rosy-Finch (*Leucosticte australis*). *In* The Birds of North America, No. 536 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Kingery, H. E. 1998. Colorado breeding bird atlas. Colorado Bird Atlas Partnership and Colorado Div. Wildl., Denver, CO.

Romme, W. H., and M. G. Turner. 1991. Implications of global climatic change for biogeographic patterns in the Greater Yellowstone Ecosystem. Conserv. Biol. 5:373-386.

Yanishevsky, R., and S. Petring-Rupp. 1998. Management of Breeding Habitat for Selected Bird Species in Colorado. Colorado Division of Wildlife. Denver, CO.