

Band-tailed Pigeon (*Patagioenas fasciata*)

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

NMPIF assessment score: 15

NM stewardship responsibility: Low

National PIF status: Watch List

New Mexico BCRs: 16, 34, 35

Primary breeding habitat(s): Ponderosa Pine Forest, Mixed Conifer Forest

Other habitats used: Spruce-Fir Forest, Madrean Pine-Oak Woodland

Summary of Concern

Band-tailed Pigeon is a summer resident of montane forests in New Mexico. Both locally and across its wide geographic range the species has shown sharp population declines since the 1960s. Prior to that time, extensive commercial hunting may have significantly reduced the population from historic levels. It is not known if current declines are the result of continuing hunting pressure, habitat changes, or other factors.

Associated Species

Northern Goshawk, Long-eared Owl, Lewis's Woodpecker (SC1), Acorn Woodpecker, Hairy Woodpecker, Olive-sided Flycatcher (BC2), Greater Pewee (BC2), Steller's Jay, Red-faced Warbler (SC1).

Distribution

A Pacific coast population of Band-tailed Pigeon breeds from central California north to Canada and Alaska, extending south to Baja California in the winter. In the interior, a migratory population breeds in upland areas of southern Utah, Colorado, Arizona and New Mexico. The species occurs year-round throughout the highlands of central Mexico, south to Central and South America.

In New Mexico, Band-tailed Pigeon breeds in forest habitat throughout the state, west of the plains. It is perhaps most common in the southwest (Parmeter et al. 2002).

Ecology and Habitat Requirements

In the Southwest, Band-tailed Pigeons inhabit montane forests dominated by pines and oaks, sometimes extending upward in elevation to timberline. In New Mexico, the species may occupy spruce-fir communities, more often in mixed Douglas-fir/pine forests and ponderosa pine forests with berry-producing shrubs. Multi-layer forests with tall trees and an understory are most favored. In southern Utah, 53% of Band-tailed Pigeons observed (N=228) were in Gambel's oak-dominated communities (Pederson and Nish 1975). In New Mexico, the species is most common in southern ponderosa pine and pine-oak communities (Keppie and Braun 2000).

Band-tailed Pigeons feed heavily on acorns, but also use pine seeds and berries associated with manzanita, madrone and elderberry. Nesting may be opportunistic depending on food availability. The species typically begins arriving in New Mexico in late March, with most breeding in late-April and May. The species often shows strong nest-site fidelity from year to year. Nests are typically placed in conifers, 15-40 feet up, often in areas of lower tree density such as around clearings or forest edges. Clutches generally consist of a single egg. Multiple clutches may sometimes be raised, perhaps depending on food availability (Gutierrez et al. 1975). Birds begin leaving the state by late August, and most are gone by mid-October (Keppie and Braun 2000, Yanishevsky and Petring-Rupp 1998).

Conservation Status

Species Assessment

DISTRIBUTION	3
THREATS	3
GLOBAL POPULATION SIZE	3
LOCAL POPULATION TREND	4
IMPORTANCE OF NEW MEXICO TO BREEDING	2
COMBINED SCORE	15

Band-tailed Pigeon is a Species Conservation Concern, Level 2 species for New Mexico, with a NMPIF combined score of 15. Its highest vulnerability score is a 4, assigned by NMPIF for negative local population trend. Band-tailed Pigeon is a national PIF Watch List species; it receives a 5 from PIF for population trend.

Population Size

Total population for the state is unknown. PIF estimates that in summer New Mexico holds less than 2% of an estimated species population of 3,900,000, or about 46,000 birds. This is an initial estimate based on BBS sampling and should not yet be considered reliable.

Population Trend

Band-tailed Pigeon achieves Watch List status largely due to strong negative population trends. BBS data show the U.S. population has decreased by an average of two percent a year since the mid-1960s. The New Mexico population shows an extremely sharp downward trend on BBS, though based on only 9 routes. BBS data for 1966-2004 are:

	Annual Trend (%)	P-value	Number of Routes
New Mexico	-10.3	<0.01	9
FWS Region 2	-5.3	<0.01	20
Western BBS	-2.0	0.01	222

Threats

Band-tailed Pigeons have been hunted heavily, and large harvests are thought to have contributed to past population declines. Despite large reductions in harvests from late 1960s to late 1980s (93% in U.S. interior states) population indices continued to decline (Braun 1994). The degree to which hunting pressure in the U.S. and Mexico continue to negatively impact populations is unknown. Hunting impacts on this species are compounded by its low annual reproductive rate of 1.26 immatures/female (Keppie and Braun 2000). Loss and degradation of habitat may present a continuing threat for the species. Long-term population declines may be linked to habitat alteration due to fire suppression, forest management practices, grazing at levels that reduce mast and berry crops, and drought.

Management Issues and Recommendations

Forestry management to benefit Band-tailed Pigeons should focus on the preservation or regeneration of mature Gambel oak stands, maintaining forest openings for berry-producing shrubs, and maintaining tall snags for roosting (Braun 1994).

NMPIF Recommendations

- Maintain forests of mixed composition, with relatively old trees, tall snags, shrubby and/or oak understory, and forest openings. Tools to achieve this may include use of prescribed burning, mechanical thinning, grazing management, and habitat restoration focused on maintaining or enhancing mast crops.

Species Conservation Objectives

PIF Objectives

The PIF North American Landbird Conservation Plan places Band-tailed Pigeon in the conservation action category Management. It sets a population objective of doubling the current, reduced population over the next 30 years.

NMPIF Objectives

- Design and carry out surveys to better understand species abundance and population trends in the region.
- Design and carry out studies researching the link between mast and berry crops and breeding success.
- Maintain or increase the present breeding population.

Sources of Information:

Braun, C. E. 1994. Band-tailed Pigeon. Pp. 61–74 *in* Migratory shore and upland game bird management in North America (T. Tacha and C. E. Braun, eds.). Int. Assoc. Fish Wildl. Agencies, Washington, D.C.

Gutierrez, R. J., C. E. Braun, and T. P. Zapatka. 1975. Reproductive biology of the Band-tailed Pigeon in Colorado and New Mexico. *Auk* 92:665-677.

Keppie, D. M., and C. E. Braun. 2000. Band-tailed Pigeon (*Columba fasciata*). *In* The Birds of North America, No. 530 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA..

Parmeter, J., B. Neville, and D. Emkalns. 2002. New Mexico Bird Finding Guide. New Mexico Ornithological Society, Albuquerque, NM.

Pederson, J. C., and D. H. Nish. 1975. The Band-tailed Pigeon in Utah. Utah State Dep. Nat. Resour. Publ. 751.

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