

Peregrine Falcon (*Falco peregrinus*)

NMPIF level: Biodiversity Conservation Concern, Level 1 (BC1)

NMPIF assessment score: 11

NM stewardship responsibility: Low

National PIF status: No special status

New Mexico BCRs: 16, 34, 35

Primary breeding habitat(s): Cliff/Cave/Rock

Other habitats used: Widespread foraging over forests, wetlands and lowland habitats.

Summary of Concern

Peregrine Falcon, one of the most widely distributed of all bird species, has experienced a remarkable recovery from low population levels in the 1950s to 1970s brought about by organochlorine pesticide contamination. Although increasing, the species is still a fairly rare breeder in New Mexico, and is vulnerable to human disturbance around nest sites.

Associated Species

Golden Eagle (BC2), White-throated Swift (SC2), Common Raven, Canyon Wren

Distribution

Peregrine Falcon has a worldwide distribution encompassing large parts of both the northern and southern hemispheres. In North America, this species is recovering from 20th century declines and has reoccupied many parts of its original range. Peregrines are patchily distributed across the entire continent, from Pacific to Atlantic and from northern Alaska and Canada south to central Mexico (White et al. 2002).

In New Mexico, Peregrine Falcons breed locally in mountains and river canyons of western New Mexico east to the Sangre de Cristo, Sandia/Manzano, and Sacramento mountains. The species is a rare winter visitor in lowlands statewide (Williams 1999, Parmeter et al. 2002).

Ecology and Habitat Requirements

Across its huge range this species occupies many different biomes. In the western United States, Peregrines generally occupy mountain and canyon habitats, including high elevation areas above 10,000 ft. Breeding areas are usually associated with water. Traditional nest locations are cliffs ranging from about 8-400 m high; cliffs 50-200 m are preferred. However, first-time breeders in the expanding population often select suboptimal sites, including a variety of human structures. Peregrine Falcons have successfully colonized some urban areas, where they use tall buildings for nesting instead of cliffs (White et al. 2002).

In New Mexico, almost all nests are constructed on ledges on relatively tall cliffs, in remote areas with minimal human disturbance. The same nest location is often re-used from year to year. Clutch size is typically 3 or 4, and a single brood per season is raised. Annual productivity may be variable due to changes in abiotic conditions and prey abundance (White et al. 2002). Peregrine Falcons prey mostly or entirely on birds. In New Mexico, a variety of locally available species are taken, including doves, swifts, flickers, jays, meadowlarks, and others. At one aerie, remains of 62 bird species were identified (S. Williams, unpubl. data). Peregrine Falcons pass through the state on migration from March-May, and July-November. Most breeding activity takes place from April-June.

Conservation Status

Species Assessment

DISTRIBUTION	1
THREATS	4
GLOBAL POPULATION SIZE	3
LOCAL POPULATION TREND	2
IMPORTANCE OF NEW MEXICO TO BREEDING	1
COMBINED SCORE	11

Peregrine Falcon is a Biodiversity Conservation Concern, Level 1 species for New Mexico, with a total assessment score of 11. Despite having a relatively low score for overall vulnerability, this species is a state priority due to its small New Mexico population and high degree of threat to breeding in the state. Peregrine Falcon is a U.S. Fish and Wildlife Service (2002) national Bird of Conservation Concern. The species is also state listed as threatened by New Mexico Department of Game and Fish.

Population Size

The estimated population size of *F. p. anatum*, the subspecies widely distributed across the western United States, was 2,500-3,000 pairs in the late 1990s. There were 529 known occupied *F. p. anatum* aeries in the Rocky Mountain and the southwestern United States region in 1997 (Mesta 1999). Total population for the three North American subspecies is probably 50,000-100,000 (White et al. 2002). The size of the breeding Peregrine population in New Mexico is unknown, but small.

Population Trend

This species was reduced to very low numbers due to organochlorine pesticide (mainly DDT) contamination in the 1950s-1970s. Since the late 1970s, improved productivity and massive reintroductions have produced steady population growth. In the late 1990s, North American breeding populations were increasing at 5–10% per year (Mesta 1999). This species is not adequately sampled by BBS in New Mexico, but the number of known Peregrine territories has increased over the past few decades.

Threats

Recovery of Peregrine Falcons since the 1980s has been associated with reduced organochlorine pesticide residues in prey, eggs and body tissues, increased eggshell thickness, and increased productivity (Enderson et al. 1995, Mesta 1999). Pesticide contamination remains a potential threat, as migratory birds may be exposed to chemicals banned in the United States. PCBs, mercury, and lead are other environmental contaminants often implicated in bird morbidities and fatalities, but none known to have exerted population effects on Peregrines in North America (Peakall et al. 1990, White et al. 2002). Habitat loss or degradation is certainly detrimental but probably not an acute threat to a species so wide-ranging and varied in habitat use. Probably the greatest threat to Peregrines breeding in New Mexico is human disturbance. Falcons in this state typically occupy fairly remote locations for breeding, and are not sensitized to human activity. Even fairly low levels of human disturbance may sometimes cause nest and territory abandonment (White et al. 2002).

Management Issues and Recommendations

Management for Peregrine Falcon should focus on protective measures to encourage territory occupancy and likelihood of nesting success. This species will also benefit from broader efforts to limit the exposure of prey species (meaning almost all birds) to pesticides and other contaminants.

NMPIF Objectives

- Limit human disturbance around nest sites. This may require closing certain public land areas to recreational use during the breeding season, especially if the location is extensively used or located close to a population center.
- Educate and encourage private landowners to recognize, report, and value nesting Peregrines, and to take steps to minimize disturbance around nests.
- Continue a ban on falconry harvesting until population has stabilized.
- Work with farmers to limit insecticide use to lowest feasible levels and encourage crops that do not need extensive insecticide control.

Species Conservation Objectives

NMPIF Objectives

- Monitor territory occupancy and nesting success statewide.
- Seek to increase annual occupancy rate of known territories to 85% (Johnson 1997).
- Seek to maintain a minimum productivity rate of 1.45 young per adult pair (Johnson 1997).

Sources of Information

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