

Prairie Falcon

Falco mexicanus

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Disclaimer: The following document was compiled based on a review of information currently available for this species as of November 25, 2005. This document can be used to assist with the identification of this species and to support the development of management recommendations as they relate to forestry activities. For more information on this species, please refer to the reference section or consult with a Species at Risk specialist.

Description

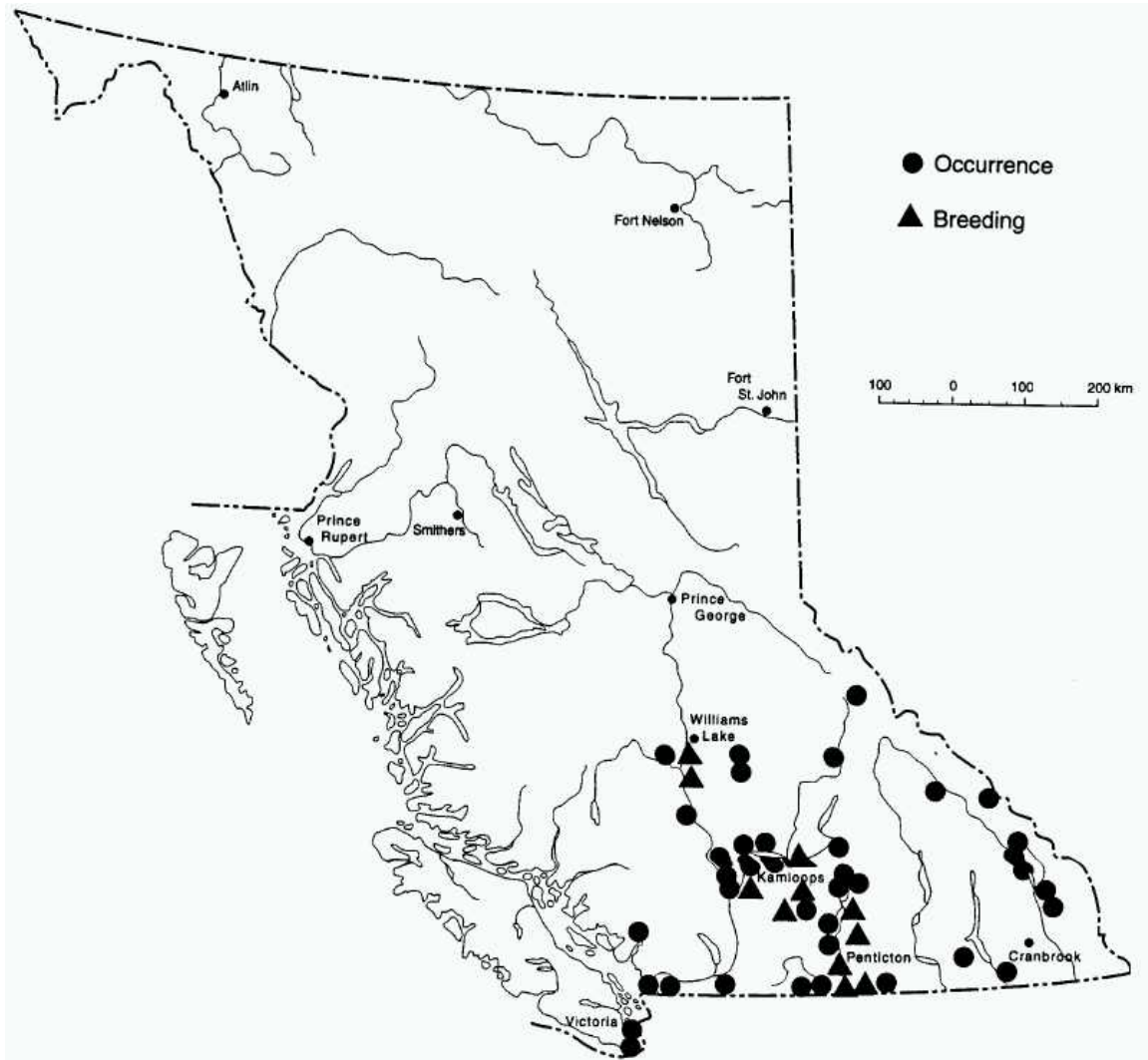
The Prairie Falcon is a crow-sized falcon similar to the Peregrine Falcon but with a narrower “moustache” and ear covert stripe¹. The Prairie Falcon has pointed wings characteristic of falcons, a hooked bill, and conspicuous (in flight) dark patches near the body on the underside of the wings (axillaries and coverts). Adults are pale brown above and whitish with heavy spotting below. Immature Prairie Falcons are similar in appearance but are buffy below. Their average length is approximately 40-50 cm with a wingspan of approximately 100 cm². The Prairie Falcon’s alarm call is a harsh ree-kree-kree-kree-kree; also a rising, repeating scream of keeekeeekeee. It is higher in pitch than the calls of the Peregrine Falcon³. [Click here](#) for more information on this species including a recording of its vocalization.



Photo courtesy of Brian K. Wheeler

Distribution

The Prairie Falcon reaches the northern limit of its range in central British Columbia. It breeds from the Okanagan and Nicola valleys of the Thompson-Okanagan Plateau region to the Chilcotin and Fraser River valleys of the Chilcotin-Cariboo Basin. Potential breeding habitat may exist in the east Kootenays, south of Windermere. Nonbreeding records exist for the Okanagan, Nicola, and South Thompson valleys, the Chilcotin-Cariboo Region, the east Kootenays, and the Peace River district. Almost all winter records are from the Okanagan Region⁴.



Range of the Prairie Falcon in British Columbia⁵

Forest Districts^{6,7}

- Central Cariboo Forest District (DCC)
- Chilcotin Forest District (DCH)
- **Cascades Forest District (DCS)**
- **Kamloops Forest District (DKA)**

- **100 Mile House Forest District (DHM)**
- Okanagan Shuswap Forest District (DOS)
- Arrow Boundary Forest District (DAB)
- Kootenay Lake Forest District (DKL)
- Rocky Mountain Forest District (DRM)

Ecoprovinces and ecosections⁷

- CEI: CAP, CAB, CHP, FRB
- SIM: EKT3 (SCM, MCR wintering only)
- SOI: GUU, NIB, NOB, OKR, SHB, SOB, SOH, STU, THB, TRU

Biogeoclimatic Units^{6,7}

- AT - Alpine Tundra
- BG - Bunchgrass - xh1, xh2, xh3, xw, xw1, xw2
- ESSF - Engelmann Spruce – Subalpine Fir -
- ICH - Interior Coastal Hemlock - dw, mw2, xw (wintering only)
- IDF - Interior Douglas-fir - dk1, dk2, dk3, dk4, dm1, mw1, mw2, xh1a, xh2a, xm, xw
- MS - Montane Spruce - xk
- PP - Ponderosa Pine - dh1, dh2, xh1, xh2
- SBPS - Sub-Boreal Pine Spruce - xc

Broad ecosystem units⁷

- Breeding: AB, BS, ME, RO, SS (DF, DP, PP – steep south facing slopes only)
- Non-breeding: AB, BS, CF, CR, ME, SS, (DF, DP, PP– in seral stage 1 only)

Elevation

In British Columbia, nesting has been documented from 450 to 900 m elevation. There are unconfirmed reports of nesting close to 2000 m elevation. In the non-breeding season, this species has been recorded from sea level to 2440 m⁷.

Map of Known Locations

The Prairie Falcon occurrence data is considered sensitive by the Conservation Data Centre (CDC). Therefore, known location data for this species is not available to the public. Please contact the CDC to request this data at:

Phone: (250) 356-0928

Fax: (250) 387-2733

Biology

Migration periods for Prairie Falcons in B.C. are poorly understood because resident birds are often difficult to distinguish from summer visitors. This is probably true more for the Okanagan than the Chilcotin-Cariboo Region though, since some of the Okanagan falcon population winters in that area¹.

Reproduction

The Prairie Falcon generally reaches sexual maturity at two years, although some females breed in their first year. In B.C., most egg-laying occurs in late April, but may be as early as 15 March⁴. Average clutch size for B.C. is four eggs, and incubation

generally lasts 29–33 days. Nestlings leave the nest after about 40 days. Young are fed by adults and may remain in the vicinity of the nest site for a variable amount of time after fledging^{1,7}.

Foraging

The Prairie Falcon's diet is highly variable, but consists mainly of mammals and small- to medium-sized birds. Mammals can comprise 8–66%, and birds, 33–92% of the diet. Reptiles and insects (primarily grasshoppers) are also eaten, but generally comprise 4% or less of the diet⁸. Variability in diet composition results from differences in prey availability among locations and seasons, and from changes in food demands between incubation and brood-rearing periods. Prairie Falcons forage mainly by pursuing their prey in flight, or by flying fairly low to the ground and stooping upon their prey¹.

Habitat

Important habitats and habitat features

The Prairie Falcon inhabits valleys and river canyons with steep escarpments or rock-faces. These sites are usually near open grasslands or sagebrush steppes which are used for hunting. Most breeding sites are near water. Prairie Falcons may also cache prey in bushes, brushy vegetation, or clumps of grass near their nest sites¹. Nonbreeding habitat is more widespread as falcons use other open areas at higher elevations, such as alpine meadows and peaks⁹.

Nesting

Prairie Falcons demonstrate a high degree of site fidelity at breeding areas and are often known to reuse the same site for several successive seasons and, possibly, for several generations. Aeries are typically located in cliff faces, usually on a shelf, within a small cave or in a pothole in the cliff face. All known aeries in British Columbia are on cliffs, although elsewhere the Prairie Falcon very occasionally nests in stick nests made by other species in trees, on power line structures, or on buildings. Cliff types include basalt rimrock, glacial till “hoodoos”, granite faces, sandstone, and limestone⁷.

An overhang over the nest seems to be preferred, presumably to protect the nest from sun, or rain and hail. Nest height from cliff bases in British Columbia ranges from 15-138m. Nests almost always consist of a simple shallow scrape, and are usually near (0-6 km) open country⁷. Most aeries tend to be south or south-west facing¹.

Foraging

During the breeding season, the Prairie Falcon hunts over grassland and sagebrush steppe habitat near the aerie. Prairie Falcons require ample accessible prey near the nest site. Open areas with relatively low-density, patchy vegetation provide habitat for the small mammals and birds that the Prairie Falcon preys upon, as well as opportunities for falcons to access their prey. Native grasslands are likely better foraging habitats than grasslands invaded by exotic species, since these invaded grasslands suffer greater fluctuations in biomass, and subsequently greater fluctuations in densities of grasslands-dependent prey species^{7,10}.



*Typical nesting and foraging habitat in the Okanagan
Photo courtesy of John Cooper*

Conservation and Management

Status⁶

Provincial Rank: S2B (Provincially Imperiled, applies to the breeding population)

BC List: Red (Endangered)

COSEWIC Status: NAR (Not at Risk)

Threats

Currently in British Columbia, the primary threat to this species is loss of foraging habitat near aeries, primarily through conversion of grassland and sagebrush steppe to agricultural land^{7,11}.

Cliff nesting habitat is secure in British Columbia, but development of hillsides below nesting cliffs may be a local problem since Prairie Falcons are sensitive to repeated human disturbance at aeries¹². Concerns have been raised about the effects of silvicultural practices on Prairie Falcons. These impacts are mainly related to timing of cutting, nearness of cutblocks to nesting cliffs, disturbance during the courtship, egg-laying and incubation periods, and removal of trees used for perching by adults and fledglings¹.

Nesting sites of Prairie Falcons are generally on inaccessible cliff faces which, under most circumstances, would be little affected by forest development activities. However, road building adjacent to nesting cliffs is a potential threat to falcons during the breeding season, especially if blasting is used¹³.

Fire suppression and subsequent forest encroachment into grassland also reduce suitable foraging areas for Prairie Falcons⁷.

Management Recommendations

Consult with a Registered Professional Biologist prior to implementing the following management recommendations because certain situations may require custom solutions based on specific site characteristics.

- Budget permitting, develop a habitat model to help identify high value habitat found within your areas of interest. The complexity of the model, and therefore its accuracy, will be dependent on budgetary constraints.
- Identify locations where this species is known to occur: if available, obtain occurrence data from the Conservation Data Centre (<http://srmwww.gov.bc.ca/cdc/>) and if necessary conduct surveys to confirm presence or absence of this species.

In areas where this species is located:

- Establish a no harvest buffer zone of at least 300m around active nest sites.
- Forestry activities (including harvest, salvage, hauling, and road construction) may only occur between August 1 and March 15 in areas outside of the 300 m buffer zone. No forestry activities should occur within the 300 m buffer zone.
- Do not enter the 300m restricted zone during the breeding season (March 15 to July 30).
- Mechanical site preparation is permitted in areas adjacent to the restricted zone between August 1 and March 15.
- Planting areas adjacent to the 300 m buffer zone should occur as late as possible during the summer in order to minimize disturbance to nesting birds during the incubation period (which generally occurs between April and May).
- Do not construct roads or blast within 1 km of active nests during the breeding season (15 March to 30 July). Avoid helicopter activity within 500m of an active nest.
- Maintain a selection of mature trees (age class 6–9) and snags (decay class 2–4)⁷. These perches are important for roosting and for hunting at terrestrial sites.
- Do not use pesticides.

References

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- ⁶ BC Conservation Data Centre. Species Summary. Website:
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- ¹² Fraser, D.F., W.L. Harper, S.G. Cannings, and J.M. Cooper. 1999. Rare birds of British Columbia. Wildl. Branch and Resour. Inv. Branch, B.C. Minist. Environ., Lands and Parks, Victoria, BC. 244pp.
- ¹³ Ferguson, R.S. 2004. Species at Risk Assessment Report for the Rocky Mountain and Kootney Lake Forest Districts, British Columbia, Canada. Tembec Industries Inc and Canadian Forest Products Ltd.