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## Birds of the Great Plains: Family Falconidae (Caracaras and Falcons)

Paul A. Johnsgard

*University of Nebraska-Lincoln*, [pajohnsgard@gmail.com](mailto:pajohnsgard@gmail.com)

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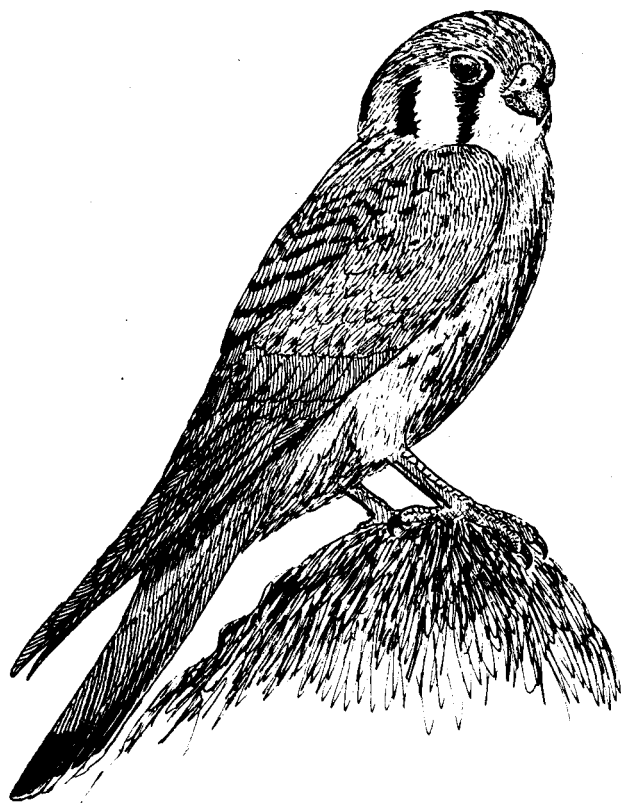
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FAMILY FALCONIDAE  
(CARACARAS AND  
FALCONS)



American Kestrel

## Prairie Falcon

*Falco mexicanus*

**Breeding Status:** Breeds locally and uncommonly in the western parts of North and South Dakota, northwestern Nebraska (Dawes and Sioux counties), eastern Colorado, extreme western Oklahoma (Cimarron County), and northeastern New Mexico (Quay County). Originally also bred on the Texas panhandle (Randall County), but there is no twentieth-century record for this area.

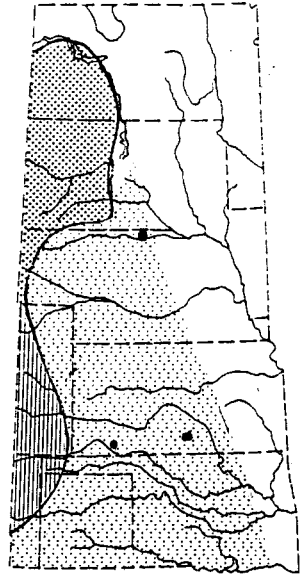
**Breeding Habitat:** This species is associated with large expanses of open grassland or sagebrush scrub with adjacent cliffs, bluffs, or rock outcrops suitable for nesting.

**Nest Location:** Prairie falcons invariably nest on tall bluffs or escarpments, usually those having ledges with overhanging rocks. The cliffs usually range from 30 to 300 feet high but at times are much higher. The ledges should have gravel or other loose materials for a nest site. The nest is only a shallow depression scooped in the gravel or sand, with no lining of vegetation. It often has a southern exposure and typically overlooks a large hunting area.

**Clutch Size and Incubation Period:** From 3 to 6 eggs (55 Colorado and Wyoming nests averaged 4.5). Eggs are pinkish buff with red to brownish spotting. The incubation period is 29–31 days, starting when the clutch is nearly complete. Single-brooded, with infrequent renesting after loss of clutches early in incubation.

**Time of Breeding:** Nests with dependent young have been seen in North and South Dakota in June and July, and a nest with 4 young and 1 egg was reported in the Black Hills for June 13. In northern Colorado and Wyoming, clutch completion records extend from April 12 to May 9, hatching from May 12 to June 8, and fledging from June 21 to July 19. Nests with eggs or both eggs and young have been reported in Oklahoma in late May.

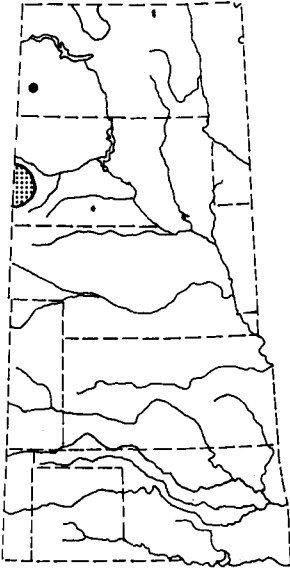
**Breeding Biology:** Prairie falcons probably first nest when two years old; yearlings normally wander during the breeding season. The birds arrive on the Wyoming and Colorado nesting grounds in late February or early March, and the male engages in aerial courtship for about a month while the pair examines potential nest sites. Frequently, nest sites of the previous year are used, even if the female is mated to a new male. The male begins to do most of the hunting for the pair during the courtship period, and the female does nearly all the incubation. Only when the female is eating food brought by her mate does he incubate, but the male performs the major role in nest defense. The young begin to acquire their flight feathers at about 30 days and fledge at about 40 days of age. Evidently a large portion survive their first



autumn, but there is an overall mortality rate of about 80 percent by the end of the first year of life.

**Suggested Reading:** Enderson 1964; Brown and Amadon 1968.

## Peregrine Falcon *Falco peregrinus*



**Breeding Status:** Extremely rare and currently limited to the Black Hills of South Dakota. Previously more widespread, including the Missouri slope of southwestern North Dakota (most recent breeding record is 1954, Billings County; earlier records for Williams, Stark, Slope, and Dunn Counties). It may also have once bred in Dawes County, Nebraska, and also formerly bred in Kansas (Woodson and Ellis counties). There are no breeding records for Oklahoma or the Texas panhandle.

**Breeding Habitat:** In the Black Hills this species is associated with deep canyons having high, vertical limestone or sandstone cliffs.

**Nest Location:** Nest sites vary considerably in various parts of this species' wide range, but in the Great Plains nests are typically on tall, steep cliffs. In general these falcons choose the steepest and most inaccessible locations and, unlike prairie falcons, definitely prefer tall cliffs to lower ones. Limestone cliffs with eroded recesses are favored, especially those offering protected ledges that are flat and grassy, at least 18 inches wide, with sheer rock above and below. The ledge must also offer a potential nest scrape where a depression can be made in sand or gravel. A few nests in tree hollows have been reported, notably in eastern Kansas.

**Clutch Size and Incubation Period:** From 2 to 5 eggs, usually 3 or 4 (23 North Dakota clutches averaged 3.6). Eggs are creamy white to pinkish with heavy brown spotting. Incubation begins with the second or third egg and lasts 28-29 days. Single-brooded, but renesting is at least locally prevalent.

**Time of Breeding:** Egg dates in North Dakota range from May 1 to May 29, and flightless young have been observed from June 28 to August 2. The estimated breeding season in the Black Hills is May through July, and in Kansas the eggs were laid in February and March. Texas records are from March 20 (eggs) to July 21 (young).

**Breeding Biology:** The use of modern pesticides has nearly eliminated this species from much of North America, but it still breeds in a few remote areas. After a pair has returned to its nesting area, the male, or both birds, performs courtship flights

consisting of diving and swooping, and sometimes passing food in the air. Mating is frequent during this period and the period of egg-laying, with the eggs laid at intervals of about 2-3 days. The female does most of the incubation, with the male bringing prey to his mate and also occasionally relieving her. The female typically eats away from the nest, on a nearby "plucking post." For the first 2 weeks after hatching the female does nearly all the brooding and feeding of the young, but later both adults hunt extensively and simply drop their prey into the nest, letting the young birds compete for it and tear it up. Usually only 2 or 3 young fledge from each brood; fledging occurs about 35-42 days after hatching. Since the advent of modern pesticides, virtually no young are fledged at most nests, since the thin-shelled eggs laid by pesticide-poisoned females fail to hatch or else the young do not survive to fledging.

**Suggested Reading:** Hickey 1969; Brown and Amadon 1968.

## Merlin (Pigeon Hawk)

### *Falco columbarius*

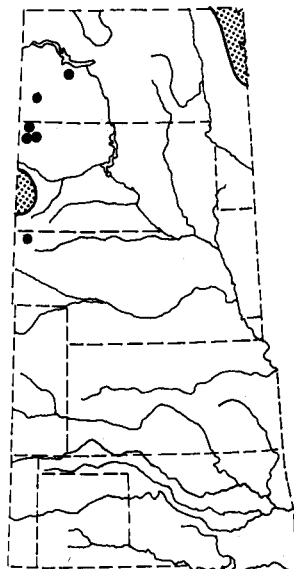
**Breeding Status:** Currently a rare breeding species in the area, with possible nesting in northwestern Minnesota (especially Kittson and Roseau counties), southwestern North Dakota (recent definite records only for Slope and Dunn counties), the Black Hills region of South Dakota (nesting record for Pennington County in 1948), and northwestern Nebraska (nest records for Dawes County, 1975 and 1978).

**Breeding Habitat:** Merlins prefer a habitat that includes both tree groves and adjoining open areas of fields, grassland, and brushy vegetation. Tree-lined coulees or ravines in otherwise open country are the typical habitat in the Great Plains.

**Nest Location:** Old crow or magpie nests are favored nest locations in the northern states and prairie provinces; such nests may be rather close to the ground in coniferous or deciduous trees. Nests have been reported in ponderosa pines in North Dakota, South Dakota, and Nebraska, and in an elm in North Dakota, the birds most often using old magpie nests.

**Clutch Size and Incubation Period:** From 2 to 7 eggs, usually 5 or 6. The eggs are light buff with heavy stippling of brown, reddish brown, and purple tones. The incubation period is 28-32 days, starting before the clutch is completed. Single-brooded.

**Time of Breeding:** North Dakota egg records are for mid-May, and dependent young have been seen from June 21 to July 10. The estimated nesting season in the Black Hills is from May

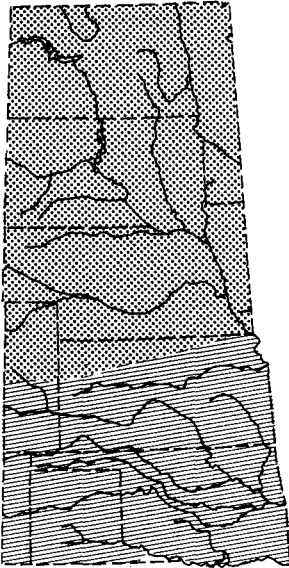


through July (newly hatched young seen on June 11), and the Nebraska nest had a probable incomplete clutch on June 13.

**Breeding Biology:** Typically, males return to the breeding ground before females and begin calling while flying from one perch to another. Little actual nest-building is done, since the birds typically take over an already constructed nest of another species. The eggs are laid at 2-day intervals, and the female begins to incubate when the clutch nears completion. Probably the only time the male takes over incubation is during the short periods the female is off the nest eating food he has brought. The eggs hatch at intervals, resulting in marked size differences among the young, which develop rapidly. Early in the brooding period all the food is brought in by the male, passed on to the female, then torn up and divided among the young. Later the female assists in hunting and bringing in food, which mostly consists of small birds. The young fledge in 25-30 days but remain in the vicinity of the nest for some time. They initially begin to hunt by catching insects but soon learn to chase and capture young birds.

**Suggested Reading:** Lawrence 1949; Brown and Amadon 1968.

## American Kestrel (Sparrow Hawk) *Falco sparverius*



**Breeding Status:** Pandemic and relatively common throughout most of the region, but least common in heavily wooded areas and also relatively uncommon where trees are too small or too scattered to provide suitable nesting sites.

**Breeding Habitat:** This most abundant of the American falcons occurs especially where scattered trees or tree groves adjoin large areas of open country, including grasslands, croplands, or badlands.

**Nest Location:** Nests are in cavities, typically in trees, but occasionally in rock crevices, old magpie nests, or even large birdhouses. When natural cavities of trees are used (including flicker cavities) they usually are 8-30 feet above the ground. Kestrels can use woodpecker cavities with entrances as small as 3 inches and occupy a wide variety of hardwood trees having such cavities.

**Clutch Size and Incubation Period:** From 3 to 5 eggs (8 North Dakota nests averaged 4.7 eggs, and 5 Kansas nests averaged 4.2). The eggs are whitish to light cinnamon, usually with small brown spots. They are laid at intervals of 2-3 days, and incubation lasts 29-30 days, starting before the last egg is laid. Single-brooded, but possible double-brooding has been found in Colorado (*Wilson Bulletin* 89:618).

**Time of Breeding:** North Dakota egg dates are from May 9 to June 21, and dependent young have been seen from July 29 to August 30. In Kansas, egg-laying dates are from March 21 to May 20. Egg dates in Oklahoma are from April 18 to May 26, and young have been seen from May 27 to August 1.

**Breeding Biology:** American kestrels are perhaps the most sociable of the falcons, and until pair-formation may associate in small groups. During the courtship period males perform aerial dive displays, whining vocalizations, and courtship feeding, which reaches a peak shortly before egg-laying. Courtship feeding serves to maintain the pair bond and also provides food for the female and her young. Sometimes the female begs for food in flight by performing a distinctive “flutter-glide” display. Copulations reach a peak just before egg-laying, but courtship feeding peaks during the egg-laying period and continues through the brooding period. The female does nearly all the incubating, and the young often hatch at intervals of about a day, somewhat less than the egg-laying interval. During the fledging period of approximately 30 days, the male continues to do most of the food gathering while the female broods and directly feeds the young. But after about 20 days the adults bring in entire prey animals and place them in the nest for the young birds to tear apart and feed themselves. The family typically remains together for some time after fledging.

**Suggested Reading:** Willoughby and Cade 1964; Balgooyen 1976.

