

Notes

Why Do Male Belted Kingfishers Winter Farther North Than Females?

by
Ron Pittaway

Belted Kingfishers (*Ceryle alcyon*) are cold-hardy and often winter as far north as open water permits (Bent 1940). During the last four winters (1991-1994), I recorded the sex of the kingfishers observed wintering in southern Ontario. Observations were made at Bobcaygeon, Lakefield, Minden, Toronto and Whitby - all situated north of Lake Ontario. Given a good view, it is quite easy to distinguish males from females in the field (Godfrey 1986). Interestingly, all the kingfishers ($n = 12$) seen well enough to classify were males. In Yellowstone National Park, Wyoming, Skinner (*in* Bent 1940) also noted that all of the kingfishers wintering along streams kept open by hot springs were males. The first females arrived there on 17 March.

Why do male kingfishers winter farther north than females? My hypothesis is that the number of nest sites in the northern part of the Belted Kingfisher's range is the major factor limiting their populations. Kingfishers usually dig their nesting tunnels in stream banks and old gravel pits, often some distance from water (Godfrey 1986). Males arrive first on the breeding grounds and defend a nest site. "When the female

arrives, she seems attracted to the nest site and then pairs with the male. The two then defend the nest site and fishing area" (Stokes and Stokes 1983). Godfrey (1986) states that breeding populations in rocky areas (e.g. Canadian Shield) are limited by the availability of nesting sites. Therefore, male kingfishers that defend winter territories on or near the breeding grounds would have the first choice of the best breeding habitats (nest sites and fishing areas). Returning females are apparently most attracted to those males holding the best breeding territories.

Of course, there may be other equally valid explanations why only male kingfishers are found at the very northern part of their winter range. I would be interested in hearing about any winter (December-February) sightings of female kingfishers in southern Ontario and about other hypotheses.

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Grasshoppers as Food Source for Black-billed Cuckoo

by
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The most frequently noted food items of the Black-billed Cuckoo (*Coccyzus erythrophthalmus*) are caterpillars, particularly the "hairy" species (Bent 1940, Godfrey 1966, Terres 1980). Other animals such as grasshoppers, beetles, crickets, mollusks, and fishes are mentioned as prey, but little has been noted on their importance as part of the cuckoo's overall diet. My examination of gizzards and proventriculae of two Black-billed Cuckoos found short-horned grasshoppers (Order Orthoptera: Family Acrididae) to be the major food item.

Both birds were road kills. The first bird was an adult female, found barely alive near Nanticoke, R.M. Haldimand-Norfolk, in the late afternoon on 24 July 1993. The second bird, an adult male, was found recently killed in the early morning near the intersection of Highway 24 and Regional Road 10 (Turkey Point Road) R.M.

Haldimand-Norfolk, on 1 August 1993. The first bird, presumably feeding for most of the day, had eight whole grasshoppers and a number of parts that were identified as a grasshopper. There was only one part that could be determined as being from another insect, identified as a caterpillar (Lepidoptera). The second bird had two whole grasshoppers and numerous grasshopper parts, plus a small amount of caterpillar hair. It had proportionately less food in its proventriculus and gizzard than the first, possibly due to less feeding time.

The number of grasshoppers in these birds suggest that cuckoos do not always depend mainly on caterpillars for the large portion of their diet. At times when caterpillars are not plentiful, the birds presumably take advantage of other, more abundant food sources such as grasshoppers.

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Mourning Doves Wintering in Ontario

by
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Introduction

The Mourning Dove (*Zenaida macroura*) occurred only sparingly in settled areas of southern Ontario 150 years ago (Snyder 1957), but had become a common breeding species of the southwestern part of the province by early in this century (Baillie and Harrington 1936). For many of these early years the Mourning Dove was migratory in Ontario (Saunders and Dale 1933). Overwintering apparently developed in agricultural areas due to the availability of waste and stored corn (Alison 1976; Armstrong and Noakes 1983). It was not until the early 1950s that wintering populations in southern Ontario "increased rapidly and in a linear fashion" (Armstrong 1987), apparently correlated with "corresponding increases in corn

production" (Armstrong and Noakes 1981). The number of overwintering Mourning Doves in southern Ontario continues to increase today. Where agricultural land has been taken over by urban development, the species has adapted through extensive use of winter bird feeders (Tozer and Richards 1974; Alison 1976). In recent years, the Mourning Dove has begun to winter even farther north in central Ontario, away from agricultural areas. This note examines some of the data which illustrate these trends in wintering by Mourning Doves in Ontario.

Southern Ontario

Freedman and Riley (1980) traced population trends of various bird species wintering in southern Ontario through an analysis of annual

Christmas Bird Count (CBC) data from seven locations (Hamilton, Kingston, Kitchener, London, Ottawa, Pickering and Toronto) during the period from 1929 to 1977. Their findings for the Mourning Dove indicated that "essentially no birds were recorded prior to 1950", followed by relatively low (but increasing) numbers during the next two decades. Then "a spectacular increase" occurred from 1970 to 1977, with the combined totals for all seven sample counts averaging about 1350 birds per year (Freedman and Riley 1980). Using the same method on CBC results reported in *American Birds* from the seven selected locations over the next fifteen years (1978 to 1992), I found an average of 3479 Mourning Doves per year (ranging from 1288 in 1982, to 5226 in 1988). These sample count results were standardized to "birds per observer" in order to compensate for increasing observer effort over time, as suggested by Raynor (1975). Freedman and Riley (1980) found a peak of about six birds per observer in 1976, while I calculated that there were 10.2 Mourning Doves per observer by 1988. The dramatic increase in wintering by Mourning Doves in southern Ontario has obviously continued.

I examined all Ontario CBC data reported in *American Birds* during the twenty years from 1973 to 1992 in order to further investigate the magnitude and timing of the increase in Mourning Dove numbers. In southern Ontario (south of the Canadian Shield), there were fully 15 Christmas Counts which achieved totals of 1000 birds (or more) during the 1980s. The average year of these counts first reaching that "plateau"

was 1987. Two southern Ontario CBCs have actually reached totals of more than 2000 Mourning Doves (i.e. 2016 at Cedar Creek in 1987, and 2001 at St. Catharines in 1988)!

Central Ontario

In 1966, it was reported that the Mourning Dove wintered in Ontario, "north rarely and precariously to Ottawa" (Godfrey 1966). Since then, however, the species has been regular (with increasing numbers) throughout the twenty years from 1973 to 1992 on CBCs at Ottawa-Hull, Pakenham-Arnprior, and Carleton Place. During the 1980s, wintering by Mourning Doves spread to various sites on the Canadian Shield. For example, they have become regular (with increasing numbers) on the following CBCs since the year shown in parentheses: Pembroke (1981); North Bay, Sault Ste. Marie, and Gravenhurst-Bracebridge (1982); Deep River, and Minden (1987); Sudbury (1988); and Burks Falls, and New Liskeard (1989). Mourning Doves have been regularly observed on an unpublished winter bird count at Huntsville since 1984 (Huntsville Nature Club records).

Wintering by Mourning Doves at these Shield communities is apparently linked to increases in local breeding populations (Alison 1976), and the provision of food at winter feeding stations adjacent to dense coniferous cover for roosting. Dow (1994) has suggested a similar dependency on feeders as "a factor critical to maintaining local populations as breeding entities" in outlying areas of the Northern Cardinal's (*Cardinalis cardinalis*) range in Ontario. Many Mourning Doves attempting to winter on the Canadian

Shield are totally dependent on feeding stations, with no access to agricultural land for corn or weed seeds.

Northern Ontario

Very recently, a few Mourning Doves have been detected on CBCs even farther north. These counts, with the number of birds in parentheses, were as follows: Timmins in 1992 (6); Thunder Bay in 1987 (2), 1991 (1), and 1992 (1); Dryden in 1992 (1); and even Moosonee in 1992 (3). Indicative of this species' continued advance northward in Ontario was the presence of at least 12 birds at Moosonee during the 1991 breeding season, with "courting and copulating pairs" observed and breeding strongly suspected (Wilson and McRae 1993). The Clay Belt was considered to be the northern boundary of breeding through the late 1980s (Peck and James 1983; James 1991).

Wintering Capability

Even with available food and cover, severely cold winter weather often causes injury, and sometimes even mortality, among Mourning Doves attempting to winter in northern areas such as Ontario (Nickell 1964; Alison 1976; Whelan 1994). Frost damage to the feet, including loss of toes, is a common injury (Alison 1976; Armstrong and Noakes 1983). However, birds sustaining such injuries can apparently still function. Studies of captive birds (Ivacic and Labisky 1973) have actually suggested that Mourning Doves may "possess a physiological mechanism that allows them to substantially reduce their

body temperature and, correspondingly, their metabolic expenditures" when exposed to low ambient temperatures and absence of food (as during winter storms).

Successful overwintering by Mourning Doves in Ontario allows them to "avoid the hazard of migration and hunting" and to "take advantage of favourable early spring conditions that may increase the length of the breeding season" (Armstrong and Noakes 1983).

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Successful Hybridization of Common Raven and American Crow

by
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Since 1985, a single Common Raven (*Corvus corax*) has frequented an urban environment approximately 145 km south of its usual range. It has been observed pursuing, killing and feeding on Rock Doves (*Columba livia*) and Gray Squirrels (*Sciurus carolinensis*) in Metropolitan Toronto, Ontario (43° 36'N, 79° 31'W). This raven has been seen most frequently in the area of the former Etobicoke Lakeshore Psychiatric Hospital. Two nests were built by this bird under the eaves of one of the four-storey buildings during the spring of 1987.

At that time there was no sign of a mate (Jefferson 1989).

Many observations during 1990 indicated that the raven had paired with an American Crow (*C. brachyrhynchos*). During April 1990 the raven was observed (M. DeLorey, pers. comm.) performing courtship flights around a crow. On 8 May 1990, the raven was observed shredding white material, and adding it to one of the aforementioned nests. It was then seen sitting on the nest for at least 45 minutes, with only its tail visible. The next day it was

observed flying into a Norway Spruce (*Picea abies*) to alight beside a crow. The raven fed the crow what appeared to be fresh "meat", and then mounted the crow. The raven and crow were subsequently observed allopreening (D.

McClement, pers. comm.; Bent 1946). Since 1990, the raven and crow have been seen flying together frequently (Jefferson 1991).

In 1990, the raven began to mimic the calls of a crow, which might have led to its acceptance by the crow. Vocal interactions between the crow and raven have been heard - a pattern of two caws coming from the crow answered by three deeper caws from the raven.

In late April 1993, the Common Raven was observed actively constructing a nest in a crotch of a spruce tree on the above site. The nest was approximately 60 cm in diameter and 40 cm deep, one metre from the top of a nine to ten metre high tree. During the next two months the raven was occasionally seen on the nest; invariably it was observed perched nearby, well-concealed in the spruce branches. In a few instances, when intruders came rather close to the nest, it flew from elsewhere on the property into neighboring trees.

A crow was thrice seen leaving the nest, but all nests were too deep for any observations of a crow sitting there. On 29 May 1993, the crow was viewed leaving the nest area to confront a high-flying Turkey Vulture (*Cathartes aura*). Three minutes later, as the crow dropped back down, the raven flew up to meet it; both corvids then returned to the nest site (G. Fairfield, pers. comm.).

On several occasions - 3, 5 and 8 May 1993 - after consuming several pieces of squirrel, the raven flew to the nest where it remained for 40-60 seconds. Precise activity at the nest was obscured by the dense evergreen branches.

On 14 June begging calls were heard from the nest vicinity (A. Fairbridge, pers. comm.). The next day the author observed much activity around the nest, with a crow and raven repeatedly calling to each other. What were later deemed to be two recently fledged hybrids made short flights between nearby deciduous trees. On 18 June 1993 positive confirmation was made of the two hybrids. They were almost raven-sized, with the wedged-shaped tail of a raven and the head of a crow. Their bills appeared very thin, shorter than that of a crow, with a small amount of yellow at the gape. The two hybrids were photographed several hundred meters south of the nest in the crowns of large maple trees (see Figure 1).

Repeatedly, both the crow and raven flew away from the young birds making loud distracting noises whenever these fledglings were approached; a few minutes later the adults would silently appear from behind the observers. This behaviour was noted frequently over a 90 minute period. Begging calls from the young were silenced when the crow flew into the trees where the young remained. Dense foliage prevented precise observations of behaviour from our position 10 m to the north. Later, cawing from these fledglings sounded more highly pitched compared to that of the crow, which in turn made calls which were higher



Figure 1: Recent fledgling resulting from the hybridization of Common Raven and American Crow at the former Etobicoke Lakeshore Psychiatric Hospital, Metropolitan Toronto, Ontario, Canada, 18 June 1993. Photo by *Beth Jefferson*.

than the deep resonating caws from the raven. The crow, raven and two hybrids continued to be seen flying together until the end of June (D. McClement, pers. comm.). During the fall of 1993, the two hybrids were frequently observed with the raven. On 27 October, all of them were seen briefly by the author chasing Rock Doves.

Both sexes of crow take an active part in nest building. Both sexes of ravens also contribute to the building of a nest and both sexes of crow may help incubate (Bent 1946: Goodwin 1976). With ravens, the male is not reported to incubate but only to cover the eggs when the female leaves the nest. In corvids the male feeds the female during incubation and the female sometimes leaves the nest to be fed by the male nearby (Bent 1946: Goodwin 1976). From these

descriptions and the other direct observations cited above, it has been concluded that the raven is a male and that the crow is a female.

If fledging took place 14 June 1993, the eggs would have hatched in early May during which time the raven was observed making frequent trips to the nest after ingesting squirrel meat. If the crow laid the eggs as is speculated, it would have occurred approximately 18 days prior to this in the second week of April. These dates have been deduced using averages cited in Ehrlich *et al.* (1988).

This appears to be the first known documentation of successful hybridization of Common Raven X American Crow in North America. In Britain, three reports of hybridization of Common Raven X Carrion Crow (*C. corone*) are cited in Gray (1958).

But these records date from 1897 to 1936. If undocumented raven X crow hybridization has occurred, it would be virtually impossible to distinguish in any of their offspring. (For example, visual hybrid features would not be as apparent as in Lawrence's and Brewster's Warblers.) The atypical location of this particular raven, and the distinguishing silvery-gray cast to its back and wings creating a two-toned effect in flight, have enabled this particular raven to be subjected to intense scrutiny. Thus details of its behaviour have been noted by many birdwatchers.

Prior to the spring 1993 observations described above, in May 1992 (G. Coady, pers. comm.) and during the winter of 1992-1993, "small ravens" were seen in the vicinity of the hospital. In addition, on 13 November 1993, a small raven-shaped bird was observed being chased by two crows, several km northwest of the hospital grounds, above High Park. This corvid was only slightly larger than the pursuing crows (B. Yukich, pers. comm.). It is speculated that these smaller "ravens" might possibly be hybrids from previous years. The 1993 adult hybrid "cravens", as they have been unofficially dubbed, closely resemble

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Red-Shouldered Hawk Survey

In 1994 and 1995, volunteers are needed to play taped recordings of this rare raptor's calls, and note the number and age of those individuals which respond along selected survey routes in south-central Ontario during late April. Routes consist of 20 stations over 19 km, and take about four

hours to complete (starting just after sunrise). Surveyors are given a tax receipt for mileage and out-of-pocket expenses. Contact: Lisa Enright, Long Point Bird Observatory, Box 160, Port Rowan, Ontario N0E 1M0. Telephone (519) 586-3531.

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