

Predation of a Bat by American Crows, *Corvus brachyrhynchos*

KARA L. LEFEVRE

Department of Zoology, University of Toronto, 25 Harbord Street, Toronto, Ontario M5S 3G5 Canada; email: k.lefevre@utoronto.ca

Lefevre, Kara L. 2005. Predation of a bat by American Crows, *Corvus brachyrhynchos*. Canadian Field-Naturalist 119(3): 443-444.

This report documents predation and possible group hunting of a bat by American Crows (*Corvus brachyrhynchos*). I observed a group of several crows appear to cooperate in order to ground and catch a bat. Predation of bats by birds in North America is relatively rare, and bat predation by crows has not been previously reported. A cooperative attack would be consistent with other group behaviours of the species, including territoriality, breeding and foraging.

Key Words: American Crow, *Corvus brachyrhynchos*, bats, Chiroptera, *Myotis lucifugus*, predation, Ontario.

Several bird species are known to feed occasionally on bats—mainly birds of prey, but also members of families Laridae and Corvidae, among others (Speakman 1991; Radzicki et al. 1999; Lee and Kuo 2001). The omnivorous American Crow (*Corvus brachyrhynchos*) is one of North America's most widespread birds

(Verbeek and Caffrey 2002). This opportunistic species is known as both a scavenger of anything edible and a predator of diverse taxa, including small mammals (e.g., Nocera 2000; Verbeek and Caffrey 2002). To my knowledge the incident reported here is the first published record of bat predation by *C. brachyrhynchos*.

I observed an episode of bat predation by American Crows along the Rideau River in Ottawa, Ontario (45°19'N, 75°40'W) on 18 April 1996 at 17:45 EST. Visibility was excellent due to the absence of foliage following winter. I noticed a group of eight crows perched approximately 10 m high, at the edge of a deciduous woodlot beside the river. The woods bordered on an open field of dead grass. Four of the eight crows remained perched while the rest became involved in a chase of a small bat (Order Chiroptera) about the size of a sparrow. Based on size and relative species abundances it was possibly a Little Brown Bat (*Myotis lucifugus*), but seven bat species that occur in the area fit the size description (A. J. Erskine and S. Peters, personal communication). Mid-April is early in the season for bat activity in eastern Ontario: *M. lucifugus* females leave the hibernacula at this time and fly to the nurseries, while males remain torpid until mid-May (Gerson 1984).

During the chase the bat flew jerkily in different directions, approximately 5–7 m above the ground, eluding capture by 1–3 crows that chased it at any given time. Each time crows approached closely the bat dropped in altitude, effectively evading them. The crows attempted to use their bills but not their feet to strike the bat. The bat seemed to escape after three minutes of this activity, and the crows stopped chase for a brief time. One crow then darted after the bat and two others followed. Two of the three crows moved in and appeared to “sandwich” the bat about 3 m above the ground. They likely struck the bat because it dropped suddenly to the ground, with the third crow in pursuit. The three crows immediately moved to the ground: one struck the bat hard enough to make it pop up into the air above their heads, and then picked the bat up in its bill. There was no apparent dispute for possession of the bat. The three crows flew up to where the others were perched; the captor and another of the chasers landed in the same branch, and then the captor flew approximately 50 m South along the edge of the woods to a new perch, also 10 m above the ground. The bat was still in its bill and none of the other crows followed. The captor attempted awkwardly to bite/peck at the bat held in its feet. After one minute at this new perch, the captor flew beyond view with the bat in its bill. The other crows remained in the original area, some perched in the trees and others in the field near where the bat had been grounded.

These observations may represent an episode of cooperative hunting. Hendricks and Schlang (1998) reported similar cooperative aerial attacks by the congeneric Common Raven (*C. corax*) on adult pigeons. Such group hunting by *C. brachyrhynchos* would be

consistent with adaptive cooperation observed in this species including group territoriality (Caccamise et al. 1997), cooperative breeding (Caffrey 1992), and group foraging (Kilham 1989; Verbeek and Caffrey 2002). The absence of any apparent competition for the captured bat suggests that the captor could have been an adult crow with the other participants being immature. Alternatively, it is also possible that this was an instance of several crows attempting to hunt the same bat individually, without any real cooperation.

This observation is noteworthy because direct predation events are seldom observed, predation of bats by birds in North America is apparently rare, and because this is the first account of American Crows hunting bats. Based on a review of the impact of bird predation on bat mortality (Speakman 1991), it is unlikely that crows pose any significant predation threat to North American bat populations.

Acknowledgments

I thank A. J. Erskine, Sandra Peters, and one anonymous reviewer for comments that improved the manuscript.

Literature Cited

- Caccamise, D. F., L. M. Reed, J. Romanowski, and P. C. Stouffer.** 1997. Roosting behavior and group territoriality in American Crows. *Auk* 114: 628-637.
- Caffrey, C.** 1992. Female-biased delayed dispersal and helping in American Crows. *Auk* 109: 609-619.
- Gerson, H.** 1984. Habitat management guidelines for bats of Ontario. Ontario Ministry of Natural Resources.
- Hendricks, P., and S. Schlang.** 1998. Aerial attacks by Common Ravens, *Corvus corax*, on adult feral pigeons, *Columba livia*. *Canadian Field-Naturalist* 112: 702-703.
- Kilham, L.** 1989. The American Crow and the Common Raven. Texas A & M University Press, College Station.
- Lee, Y. F., and Y. M. Kuo.** 2001. Predation on Mexican free-tailed bats by Peregrine Falcons and Red-tailed Hawks. *Journal of Raptor Research* 35: 115-123.
- Nocera, J. J.** 2000. Predation on an Eastern Chipmunk, *Tamias striatus*, by an American Crow, *Corvus brachyrhynchos*. *Canadian Field-Naturalist* 114: 326-327.
- Radzicki, G., J. Hejduk, and J. Banbura.** 1999. Tits (*Parus major* and *Parus caeruleus*) preying upon hibernating bats. *Ornis Fennica* 76: 93-94.
- Speakman, J. R.** 1991. The impact of predation by birds on bat populations in the British Isles. *Mammalian Review* 21: 123-142.
- Verbeek, N. A. M., and C. Caffrey.** 2002. American Crow (*Corvus brachyrhynchos*) in *The Birds of North America* (647). Edited by A. Poole and F. Gill. The Birds of North America, Inc., Philadelphia, Pennsylvania.

Received 1 July 2004

Accepted 2 September 2005