

# Note

## Common Nighthawks (*Chordeiles minor*) Can Take Off from Water

LIAM P. MCGUIRE<sup>1,3</sup> and R. MARK BRIGHAM<sup>2</sup>

<sup>1</sup>Department of Biological Sciences, Texas Tech University, Lubbock, Texas 79409 USA

<sup>2</sup>Department of Biology, University of Regina, Regina, Saskatchewan S4S 0A2 Canada

<sup>3</sup>Corresponding author: liam.mcguire@ttu.edu

McGuire, Liam P., and R. Mark Brigham. 2017. Common Nighthawks (*Chordeiles minor*) can take off from water. *Canadian Field-Naturalist* 131(2): 125–127. <https://doi.org/10.22621/cfn.v131i2.1830>

Common Nighthawks (*Chordeiles minor*) are aerial insectivores that often forage over water, at high speeds, and sometimes at high densities. Foraging nighthawks have regularly been observed flying < 1 m from the surface of water. Under these circumstances, navigation errors or mid-air collisions could result in birds falling into the water, with the risk of drowning. We report two observations of Common Nighthawks that fell into a river and were able to take off from the surface of the water easily without any noticeable detrimental effects.

Key Words: Common Nighthawk; *Chordeiles minor*; foraging behaviour; flight ability

Common Nighthawks (*Chordeiles minor*) forage by capturing insects in flight (Brigham *et al.* 2011). Common Nighthawks are widespread and common over much of North America, but are declining in many parts of their range (Nebel *et al.* 2010) and are currently listed as threatened in Canada (COSEWIC 2007; Species at Risk Public Registry 2016). Habitat is variable across the species' range, including prairies, forests with clearings (including areas recently burned or thinned), rocky terrain, or gravel rooftops in urban areas, all typically including open ground cover for nesting (Brigham 1989; Hagar *et al.* 2004; Brigham *et al.* 2011; G. Foley and A. Sidler, unpublished data).

Crepuscular foraging may occur in any part of the home range in which flying insects are found, but is often associated with aquatic emergent insects over water (Brigham and Fenton 1991; Brigham and Barclay 1995; Ng 2009; Taylor 2009). Foraging frequently occurs close (< 1 m) to the water surface and may involve high densities of birds (Taylor 2009; Brigham *et al.* 2011). At our field site in British Columbia, we regularly observe several hundred birds foraging simultaneously along a short (~300 m long and 50 m wide) stretch of river. We have also observed nighthawks fluttering over water and dipping their bill into the water to drink, as reported elsewhere (Brigham *et al.* 2011).

Given the habit of Common Nighthawks to forage over water, in high-density flocks and at high flight speeds (about 6.5 m/s; Brigham *et al.* 1998), it seems likely that navigation errors or mid-air collisions result in some birds falling into the water. Aside from the obvious risk of drowning, in our work with Common Nighthawks at this site, we have observed that handling birds when hands are moist or wet from river water or sweat results in the loss of many ventral body feathers. Thus, birds falling into the water could be at additional risk of losing body feathers, which may have implications for thermoregulation when they roost on the ground.

R.M.B. has studied Common Nighthawks in British Columbia for 30 years (Brigham 1989). For many projects over that period, Common Nighthawks have been captured in mist nets set across the Okanagan River in s̓x̓w̓ə̓x̓nitk̓w̓ Provincial Park (formerly Okanagan Falls Provincial Park) near the town of Okanagan Falls, British Columbia, Canada (49°20'26.59"N, 119°34'48.87"W).

In June 2016, we captured 158 nighthawks over six nights as part of an ongoing research project. For the first time, after capturing more than 1000 nighthawks at this site over the years, we observed two birds (one each on two separate nights) fall into the water. Both birds had been released at the net and landed in the water rather than flying away easily as all other birds had done. One bird immediately flapped its wings and took off from the water. The other bird spread its wings and floated downstream on the surface of the river for 3–4 s, travelling about 4 m before flapping and taking off. Neither bird had any difficulty taking off from the surface of the water, nor did they have any difficulty flying after being in the water. Further, we did not observe any feather loss in these birds.

On both nights when a bird ended up in the water, there was a very high density of birds foraging at the capture site. Exact numbers are difficult to determine, but we conservatively estimate that about 400 individuals were foraging over the river. At this time of year, all birds are adult, ruling out the possibility of inexperienced flight. Although it is unclear why the two birds fell into the water, the high density of birds may have interfered with their ability to fly away from the net, and perhaps they ended up in the water to avoid a mid-air collision with another bird. Regardless of the reason, both birds were able to take off easily from the surface of the water and did not appear to suffer any ill effects. Given the long wings and high aspect ratio of Common Nighthawks (Brigham and Fenton 1991), it is somewhat surprising that the birds were able to thrust themselves into the air from the surface of the

water. However, their low wing loading could make it easier.

To our knowledge, this is the first report of the ability of Common Nighthawks (and only the second bird of the family Caprimulgidae) to take off from the surface of a body of water. With high foraging densities and a habit of foraging very close to the surface of the water, it is perhaps not a rare occurrence for a bird to fall into the water. The situation is likely to be even more pronounced when volant juveniles further increase the density of foraging birds, perhaps with less agility than experienced fliers. Fluttering over water and drinking by dipping the bill into the moving current also adds to the risk of falling into the water. Our observations suggest that there is little risk to birds that fall into the water, as they can easily take off from the surface and fly away unharmed.

Among other Caprimulgids, the only record of being on water is for a Chuck-will's-widow (*Antristomus carolinensis*). Thayer (1899) reported that one alighted on the surface of water and took off. Birds of North America accounts for other aerial insectivores suggest that Tree Swallows (*Tachycineta bicolor*; Winkler *et al.* 2011), Cliff Swallows (*Petrochelidon pyrrhonota*; Brown *et al.* 2017), Bank Swallows (*Riparia riparia*; Garrison 1999), and Barn Swallows (*Hirundo rustica*; Brown and Brown 1999) all paddle their wings and swim to shore if they fall into water. There is no information for Violet-Green Swallows (*Tachycineta thalassina*; Brown *et al.* 2011). Black Swifts (*Cypseloides niger*; Lowther and Collins 2002) are reported not to swim, but there are no reports for other swifts found in Canada. Thus, taking off from water by nighthawks appears to be unlike the strategy employed by other aerial-feeding insect-eating birds.

### Acknowledgements

We are grateful to A. Brigham for assistance in the field, and to G. Foley and A. Sidler (University of Regina) for information about nesting habitat. Funding for this research was provided by Texas Tech University and the Natural Sciences and Engineering Research Council of Canada. All research was approved by the Animal Care and Use Committees at Texas Tech University and the University of Regina and conducted under permits from Environment Canada and the British Columbia Ministry of the Environment.

### Literature Cited

- Brigham, R. M.** 1989. Roost and nest sites of Common Nighthawks: are gravel roofs important? *Condor* 91: 722–724. <https://doi.org/10.2307/1368127>
- Brigham, R. M., and R. M. Barclay.** 1995. Prey detection by common nighthawks: does vision impose a constraint? *Ecoscience* 2: 276–279. <https://doi.org/10.1080/11956860.1995.11682294>
- Brigham, R. M., and M. B. Fenton.** 1991. Convergence in foraging strategies by two morphologically and phylogenetically distinct nocturnal aerial insectivores. *Journal of Zoology* 223: 475–489. <https://doi.org/10.1111/j.1469-7998.1991.tb04778.x>
- Brigham, R. M., M. B. Fenton, and H. D. J. N. Aldridge.** 1998. Flight speed of foraging common nighthawks (*Chordeiles minor*): does the measurement technique matter? *American Midland Naturalist* 139: 325–330. doi: [https://doi.org/10.1674/0003-0031\(1998\)139\[0325:FSOFCN\]2.0.CO;2](https://doi.org/10.1674/0003-0031(1998)139[0325:FSOFCN]2.0.CO;2)
- Brigham, R. M., J. Ng, R. G. Poulin, and S. D. Grindal.** 2011. Common Nighthawk (*Chordeiles minor*). In *The Birds of North America*. Edited by P. G. Rodewald. Cornell Laboratory of Ornithology, Ithaca, New York, USA. <https://doi.org/10.2173/bna.213>
- Brown, C. R., and M. B. Brown.** 1999. Barn Swallow (*Hirundo rustica*). In *The Birds of North America*. Edited by P. G. Rodewald. Cornell Laboratory of Ornithology, Ithaca, New York, USA. <https://doi.org/10.2173/bna.452>
- Brown, C. R., M. B. Brown, P. Pyle, and M. A. Patten.** 2017. Cliff Swallow (*Petrochelidon pyrrhonota*). In *The Birds of North America*. Edited by P. G. Rodewald. Cornell Laboratory of Ornithology, Ithaca, New York, USA. Accessed 5 February 2017. <https://birdsna.org/Species-Account/bna/species/cliswa>.
- Brown, C. R., A. M. Knott, and E. J. Damrose.** 2011. Violet-green Swallow (*Tachycineta thalassina*). In *The Birds of North America*. Edited by P. G. Rodewald. Cornell Laboratory of Ornithology, Ithaca, New York, USA. <https://doi.org/10.2173/bna.14>
- COSEWIC (Committee on the Status of Endangered Wildlife in Canada).** 2007. COSEWIC assessment and status report on the Common Nighthawk *Chordeiles minor* in Canada. COSEWIC, Ottawa, Ontario, Canada. Accessed 24 July 2016. [http://www.sararegistry.gc.ca/virtual\\_sara/files/cosewic/sr\\_chordeiles\\_minor\\_e.pdf](http://www.sararegistry.gc.ca/virtual_sara/files/cosewic/sr_chordeiles_minor_e.pdf).
- Garrison, B. A.** 1999. Bank Swallow (*Riparia riparia*). In *The Birds of North America*. Edited by P. G. Rodewald. Cornell Laboratory of Ornithology, Ithaca, New York, USA. <https://doi.org/10.2173/bna.414>
- Hagar, J., S. Howlin, and L. Ganio.** 2004. Short-term response of songbirds to experimental thinning of young Douglas-fir forests in the Oregon Cascades. *Forest Ecology and Management* 199: 333–347. <https://doi.org/10.1016/j.foreco.2004.05.054>
- Lowther, P. E., and C. T. Collins.** 2002. Black Swift (*Cypseloides niger*). In *The Birds of North America*. Edited by P. G. Rodewald. Cornell Laboratory of Ornithology, Ithaca, New York, USA. <https://doi.org/10.2173/bna.676>
- Nebel, S., A. Mills, J. D. McCracken, and P. D. Taylor.** 2010. Declines of aerial insectivores in North America follow a geographic gradient. Présence d'un gradient géographique dans le déclin des insectivores aériens. *Avian Conservation and Ecology* 5: 1. <https://doi.org/10.5751/ACE-00391-050201>
- Ng, J. W.-M.** 2009. Habitat use and home range characteristics of Common Nighthawks (*Chordeiles minor*) in mixed-grass prairie. M.Sc. thesis, University of Regina, Regina, Saskatchewan, Canada.
- Species at Risk Public Registry.** 2016. Species profile: Common Nighthawk. Species at Risk Public Registry Office, Gatineau, Quebec, Canada. Accessed 24 July 2016. [http://www.sararegistry.gc.ca/species/speciesDetails\\_e.cfm?sid=986](http://www.sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=986).
- Taylor, P.** 2009. Late-summer feeding and migration behaviour and numerical trends of Common Nighthawks, *Chordeiles minor*, near Pinawa, Manitoba, 1976–2009. *Canadian*

Field-Naturalist 123: 338–345. <https://doi.org/10.22621/cfn.v123i4.1003>

**Thayer, G. H.** 1899. The Chuck-will's-widow on shipboard. Auk 16: 273–276. <https://doi.org/10.2307/4069463>

**Winkler, D. W., K. K. Hallinger, D. R. Ardia, R. J. Robertson, B. J. Stutchbury, and R. R. Cohen.** 2011. Tree Swal-

low (*Tachycineta bicolor*). In *The Birds of North America*. Edited by P. G. Rodewald. Cornell Laboratory of Ornithology, Ithaca, New York, USA. <https://doi.org/10.2173/bna.11>

Received 25 July 2016

Accepted 24 May 2017