Yellow Warbler Nestling Predation by Eastern Fox Snake

by
Reid Wilson

Our family's cottage is located on a 1 ha island in the Georgian Bay archipelago, 18 km southwest of Pointe au Baril, Parry Sound District, Ontario. The nearest mainland shore is approximately 10 km to the east, with dozens of islands of varying sizes in between.

Most small islands, like ours, have limited vegetation growing from the shallow soils over the pre-cambrian rock. It consists mostly of white pine *(Pinus strobus)*, white cedar *(Thuja occidentalis)*, white birch *(Betula papyrifera)*, sugar maple *(Acer saccharum)*, pin cherry *(Prunus pensylvanica)*, choke cherry *(P. virginiana)*, juniper *(Juniperus communis)* and many various shrubs, mosses and grasses. Because of the small island's relative isolation, mammalian predators of ground-nesting or near ground-nesting birds, such as raccoon *(Procyon lotor)* and mink *(Mustela vison)* are few. We (my wife, Margaret, and I) have recorded 75 breeding species of birds within the island archipelago, one of the most common of which is the Yellow Warbler *(Dendroica petechia)*.

Yellow Warblers have nested on our island every year for many years, although we have not always found the nest. On 3 June 1984, we found a Yellow Warbler nest under construction 0.6 m high in the crotch of a choke cherry shrub. On 15 June we returned to find four eggs being incubated by the female. The inevitable cowbird egg was removed from the nest in the hopes that the three remaining eggs would hatch and the young warblers would eventually fledge. On 23 June, the three eggs all hatched between 0900h and 1700h and both male and female began busily bringing food to the hatchlings.

The young grew rapidly but on 20 June (four or five days from fledging) we observed both parents in an excited state near the nest. On closer investigation we found that a large Eastern Fox Snake *(Elaphe vulpina gloydi)* had wound its way up the centre stalk of the choke cherry and was about to devour the third nestling (two large lumps farther down the snake's neck indicated that it had already eaten the first two). We interrupted its attempt and it dropped the third bird which was visually unharmed but most likely in severe shock. The fox snake, which was approximately 1.5 m long and about 3 cm in diameter, disappeared into the undergrowth and we left the immediate vicinity of the nest, hoping the parents would resume feeding the last

remaining nestling.

In about ten minutes, the parent birds, along with an onlooking Red-Eyed Vireo *(Vireo olivaceus)* and a Yellow-rumped Warbler *(Dendroica coronata)*, again began chirping and ticking loudly and we arrived at the nest just in time to see the fox snake carrying off the last young bird.

This was not the first time we had seen an unsuccessful nesting of the Yellow Warbler on our island, although it was undoubtedly the most dramatic. We found a recently constructed nest about 1 m up in a meadowsweet *(Spirea alba)* bush on 10 June 1983 and returned on 25 June to find it had been destroyed; cause unknown. On 10 July 1982 we found four Yellow Warbler eggs in a nest 0.75 m up in the crotch of a sugar maple sapling. Three eggs hatched on 17 July and the fourth on 18 July. On 21 July, we found the nest to be empty and deserted by the parents; cause unknown. My mother tells of Yellow Warbler young she observed in a nest in a choke cherry bush near the cottage (c. 1972) that were also predated by an Eastern Fox Snake.

Predation of ground-nesting or near ground-nesting warblers by snakes would appear to be relatively common, but information seems to be somewhat sketchy. In his discussion of the Eastern Yellow Warbler, Bent (1953) noted:

> "The presence of a garter snake at the base of the bush caused great excitement; the snake was seen to climb up into the bush and carry off one of the young when it was about six days old; the young bird was dead before it could be rescued."

Bent also mentions snake predation of Black-and-White *(Mniotilta varia)* and Prothonotary Warblers (*Protonotaria citrea*). In his study of the Prairie Warbler *(Dendroica discolor)*, Nolan (1978) observed that "Of 18 mobbings (14 April – 28 July), 6 certainly and 5 others probably were directed at snakes". The snakes referred to by Nolan were rat snakes and racers. In reference to a pair of Kirtland's Warblers *(Dendroica kirtlandi)* and their five hatchlings, Walkinshaw (1983) noted:

> "On 1 July O.S. Pettingill (personal communication) visited the region and found this pair of adult warblers in an agitated state. The nest was empty and nearby a large garter snake was found which showed several lumps in its body. Three of the banded nestlings were squeezed out of the snake and a fourth was found dead beside the nest."

The Eastern Fox Snake is fairly common in the Georgian Bay archipelago, and reaches the northern limit of its range near Point au Baril (Logier and Toner 1961). According to Froom (1967), the fox snake can climb, but because of its heavy body it is mostly a ground snake:

> "It is an excellent mouser, and cottagers that have fox snakes about their property report that they are seldom bothered by mice. Rodents form the bulk of its food, but it may also eat amphibians and, occasionally, earthworms. It is a constrictor and kills large prey in its coils."

It seems clear that snakes find young birds in nests easy prey and

are probably easily found by the loud chirping at the nest each time food is brought by the parents. Once a nest had been located, the snake would persist until the food supply had been exhausted.

Acknowledgements
I would like to thank my wife Margaret Wilson for her excellent record-keeping in our island "ecology" book from whence these observations were extracted. Thanks also to Dr. J. Murray Speirs for help in finding references in his personal library on predation of bird nests by snakes.

Eds. Note: D. Fraser comments: "My experience with the fox snake from southern Georgian Bay (Go Home Bay, Muskoka Dist.) suggests that it is quite arboreal. I remember once finding a fox snake which had predated a Common Merganser *(Mergus merganser)* nest. The merganser had built its nest at the bottom of a hollowed-out white pine stump about 1.5 m deep. When found, the fox snake was stretched to its full length (approx. 1.5 m) along an overhanging pine bough (eye level) with 6 or 7 conspicuous bulges indicating ingested eggs. When disturbed it moved sluggishly but adeptly. Fox snakes are obviously able to climb a vertical surface but whether they can move straight up or ascend in a spiral fashion, I am unsure.")

Literature Cited

Bent, A.C. 1953. Life histories of North American wood warblers. Part 1. U.S. Natl. Mus. Bull. 203. (reprinted 1964, Dover Publications, Inc. New York).

Froom, B. 1967. Ontario snakes. Ontario Department of Lands and Forests, Toronto, Ontario.

Logier, E.B.S. and G.C. Toner. 1961. Check list of the amphibians and reptiles of Canada and Alaska. Contribution No. 53. Life Sciences Division, Royal Ontario Museum, Toronto.

Nolan, V. 1978. The ecology and behavior of the Prairie Warbler *Dendroica discolor.* A.O.U. Ornithol. Monogr. No. 26.

Walkinshaw, L.H. 1983. Kirtland's Warbler: the natural history of an endangered species. Cranbrook Institute of Science, Bloomfield Hills, Michigan.

Reid Wilson, 1374 Tatra Drive, Pickering, Ontario, L1W 1K6

Migrant Warblers Scold an Eastern Fox Snake

At 1400h, 12 May 1985, while walking in the field north of Tilden's Woods at Point Pelee, Essex Co., I was attracted toward one of the thickets of 3 to 5 m Manitoba maple *(Acer negundo)* and dogwood (*Cornus* sp.) by the incessant chattering of small birds. Peering into the undergrowth, I could see no cause for the noise,

until one of the "trunks" moved and continued on up a Manitoba maple. An Eastern Fox Snake *(Elaphe vulpina gloydi)* measuring almost 2 m in length was being scolded by three warblers, a Magnolia *(Dendroica magnolia)*, Yellow *(D. petechia)*, and Ovenbird *(Seiurus aurocapillus)*, which all kept a respectful distance. There appeared to be no nests in this thicket although Yellow Warblers were nesting in the area. We watched the birds for several minutes and it was only when the snake reached the upper branches of the thicket that they stopped harrassing the snake and flew away. Does one assume that snakes are such a grave danger to nests that even in migration, warblers will attempt to drive them away from nesting habitat?

Victoria Lister Carley, 211 Riverdale Avenue, Toronto, Ontario M4K 1C4

Further Observations on Structural Damage to Buildings by Woodpeckers

John Carley's note in the April 1985 issue of *Ontario Birds* (Vol. 3, No. 1) reminded me of two incidents that I was called to investigate in the past. At the time they were of passing interest to me merely as part of my vocation. In retrospect, the significance of these sightings is, to say the least, thought-provoking. Why do birds attack buildings? Presumably, the answer is easy—they use them for their resonant capabilities for drumming or as a food source. The former reason seems fairly straight forward. But how do woodpeckers discover that chimneys and siding can produce sounds that are exciting to female woodpeckers? Further, how do they associate these buildings with food? Perhaps they discover hidden food sources during their romantic sonatas, or is it merely trial and error? I will leave these speculative arguments for others to ponder.

In October 1983, I attended a residence in Asphodel Twp., Peterborough County to assist a resident in controlling woodpeckers that were "destroying her home". The building was an old log structure that had been modernized throughout using cedar shakes as siding on the upper story. These had apparently been in place for several years and, although recently stained, showed definite signs of age. At first the damage appeared totally random, indicating a simple search for food by the woodpeckers. However, upon closer examination, the birds seemed to concentrate their efforts on the east and west sides of the building, particularly in the immediate vicinity of the upstairs windows (Figure 1). In addition, most of the damage was along the seams where the shakes intersected. A careful search of the wall surfaces revealed intermittent activity by a "leaf-cutting" species of ant that due to its small size and

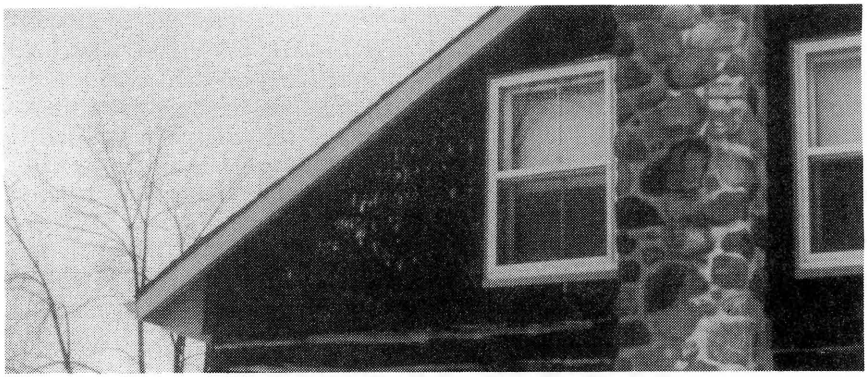

PHOTO: G. CARPENTIER

Figure 1. Woodpecker damage to cedar shakes.

elusive behaviour could not be identified. During the course of my investigation, two Downy Woodpeckers *(Picoides pubescens)* and a Hairy Woodpecker *(P. villosus)* were seen to land on the facing and probe the cracks, periodically pulling something from the crevices. They did not actually excavate any holes during this period.

In June 1985, while working on the Ontario Breeding Bird Atlas, I noted damage to an old barn in Percy Twp., Northumberland County. This damage was quite old, but its origin was obvious. In this case, damage was concentrated along the lower edges of vertical pine boards above a stone foundation (Figure 2). Unlike the previous observation, the damage appeared to follow the grain of the wood, particularly where the boards met the stone. Instead of small excavations, long channels were cut in the wood, indicating the birds were following channels

Figure 2. Woodpecker damage to barn-siding.

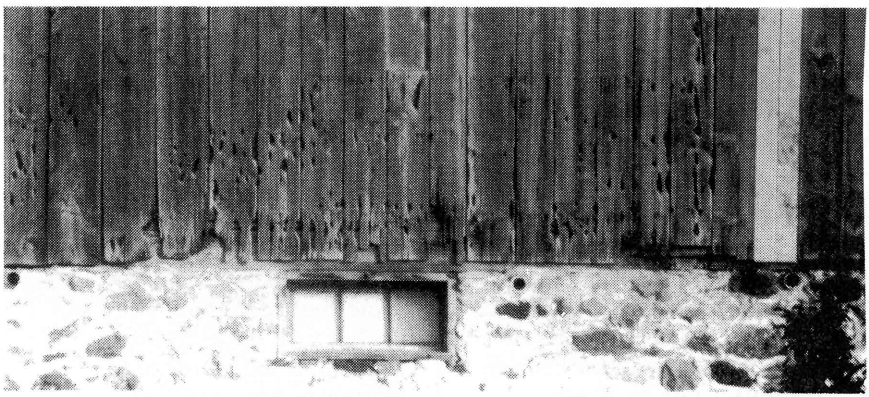

PHOTO: G. CARPENTIER

cut by some insect. Closer inspection revealed the former presence of Carpenter Ants throughout many of the boards. The species of birds involved could not positively be ascertained.

It would appear that in both of these cases, the birds were using the buildings as food sources, although the method of feeding was substantially different, due primarily to the habits of the two prey species.

A. Geoffrey Carpentier, 42 Wallis Drive, Peterborough, Ontario K9J 6B7

Book Review

Birds of North America, Eastern Region. 1985. By *John Bull, Edith Bull, Gerald Gold & Pieter D. Prall.* Collier Books, Macmillan Publishing Company, New York. 156 pp.

As I thumbed through this slender volume for the first time, I groaned inwardly. "Not another pretender to the Peterson throne". I flipped and browsed, and wondered what could be different. So I sat down and read it.

On the assumption that most O.F.O. members are reasonably competent at field indentification, this book is more likely to be recommended and given by members than bought for their own use. *Birds of North America* is aimed at novice birders, it is not a pretentious book, indeed it asks to be kept at the kitchen window or in the car's glove box. It makes no claim to be thorough or exhaustive, dealing with only 253 eastern species and therefore, clearly, there are large gaps.

The book, after a concise introduction to the very basics of bird watching, gets on with its task. There is no phylogenetic order or scientific names here (other than in the Appendix). The birds are organized into groups of birds having broadly similar characteristics. Plate 1 on "Blue birds" illustrates Indigo Bunting, Blue Grosbeak, Eastern Bluebird, Blue Jay and Belted Kingfisher. Plates 2 & 3 are "Red Birds", Plates 4 & 5 "Black birds", and so on. There are "tree clingers", "small grayish birds" and "large grayish birds". I'm not entirely comfortable with the selected groupings, but I'm hard-put to think of better.

The illustrations are painted, not photographs, thank goodness! They are sometimes a little stiff, almost Audubonesque, but they do illustrate field marks well, though often at the expense of strict accuracy. Nevertheless, the authors are to be commended for sticking to their task of meeting the needs of new birders.

The omissions must have caused some soul-searching. They will likely cause some lifelong confusions unless further references are consulted. The