

AN UNUSUAL NESTBOX NESTING OF THE WINTER WREN

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The Winter Wren (*Troglodytes troglodytes*) is a secretive species of the silent depths of shady, damp northern forests where its favorite nest site is in the upturned root pads of fallen trees, or in cavities found in mossy stumps and logs near ground level (Bent 1964; Bull 1974; Eaton 1912; and Forbush 1929). While it is partial to these lowlying, mostly earthen or decaying wooden cavities, I know of no reported instance in North America of it adapting to a man-made nestbox attached to a roof overhang of an occupied building to rear its young; or to build a mock nest in a flower planter attached to the roof overhang of another nearby occupied building. Both of these extraordinary events occurred in 1989 at Tawiskarou, Jenny Lake, in the Town of Corinth in northern Saratoga County, New York. The following is a chronological account of these events reported to me or witnessed by me, though not all reports were received in chronological order.

OBSERVATIONS

Jenny Lake is a small glacial bowl of about 47 ha at 376 m elevation atop the Kayaderosseras Range in the southeast corner of the Adirondack State Park. Sixty-five summer camps are situated along about one-half of its shore and in the forest contiguous to that shore. Once heavily lumbered and farmed, the area has been allowed to revert to forest primarily of Eastern White Pine (*Pinus strobus*), Eastern Hemlock (*Tsuga canadensis*), and northern hardwoods, principally maple (*Acer* sp.). While some older growth exists, the regrowth is mostly about 40-80 years old, and is in very close proximity to these camps. Clearings in the forest, other than for narrow access roads and the camps themselves, are few and very limited in area. The outlet of Jenny Lake is a tumbling, rocky, mountain brook dropping 20 m in 0.65 km to feed Efner Lake, before becoming part of the Hudson River drainage via Great Sacandaga Lake. This outlet brook typifies those mystical places that Bent (1964) and Eaton (1912) so eloquently attribute to the nesting of this secretive forest mite.

C. W. Huntley, a camp owner who has birded the area for about 25 years, told me he has heard Winter Wren and Louisiana Waterthrush

(*Seiurus motacilla*) sing along this brook but, though suspected, nesting there was never confirmed. At his camp about 200 m north of this brook, he discovered nearly 20 years ago a Winter Wren nest on a ledge of his back porch, and a nearby mock nest suspended on the branch tip of a White Pine. The porch nest contained 4 young. The adult, presumably the female, was killed by a cat in early July just before the young were prepared to fledge, and efforts to raise the orphaned young failed.

About 50 m north of the Huntley camp there is a 7-8 m wide cut in the forest that extends into the forest about 120 m from the lake. It serves as drainage for a wet, low area in the forest. In late Jan 1986, a severe coastal storm brought heavy snow and wind to the area, toppling 6 or more Eastern Hemlocks into this forest cut, creating the impenetrable tangle of branches and upturned root pads in a damp setting so favorable to the Winter Wren. In May 1987, C. W. Huntley and I repeatedly saw and heard a male Winter Wren in this area. Nesting was strongly suspected but not confirmed. On 26 July 1987 I heard the male singing at my camp, located about 275 m north of the suspected nesting area. It was the last time and only time that summer that I heard the bird sing away from the immediate, suspected nesting site in the forest cut. On that same day about 100 m further away, I saw a second Winter Wren; and experienced occasional sightings of 1-3 wrens there in August and September.

In 1988, a male Winter Wren again appeared at the damp forest cut, and from May to July filled the forest with song. His presence and behavior again strongly suggested breeding, but no nest was sought or found. In autumn 1988, the downed hemlocks were cleared and the area returned to its earlier status of an open slash in the mature forest. No wren appeared at the forest cut in 1989.

However, on 4 July 1989 while I was fishing at the lake outlet, I heard some unfamiliar vocalizations in dense alder cover (*Alnus* sp.) at the lake outlet dam. I located the source and saw an adult Winter Wren feeding a wing-fluttering juvenile that had a yellow, fleshy gape. This location was 280 m south of the previously suspected site in the forest cut, and the feeding behavior suggested that the wren nested near the outlet brook.

On about 3-4 July, a wren (later identified as a male Winter Wren when I learned of this on 22 July) began appearing at the camp of Merrylea and Donald Trawin. Their camp is situated about 310 m north of the outlet, and 20 m from the terminus of the previously referred to

forest cut. On 10 July this bird was seen by the Trawins visiting a roof-hanging planter containing several white *Impatiens* plants. The Trawins discovered it was building a nest atop the soil among the bases of the plant stems. During my visit of 22 July, the forest rang with the song of a nearby Winter Wren, and the now completed nest matched that described for the species by Bent (1964) and others. It was a domed structure composed of very fine, dead hemlock twigs, and green moss. Most sources mention spruce and fir twigs, not hemlock. It measured 11 cm high and 11-12 cm in diameter. The entrance hole was 2.2 x 2.5 cm in diameter, centered 6.4 cm above the base. The nest was empty, and at no time during the summer was it known to contain eggs or young. I photographed it on 23 July.

The planter which held the nest was 23 cm in top diameter and 13 cm high. The *Impatiens* plants were about 30 cm high. The top of the planter was 2.5 m above ground, hanging from the camp roof overhang that was 3.1 m above ground. The area under the roof was a screened porch and beneath the overhang was a hedge of trimmed hemlock 2 m high.

Some notes on the behavior of the male recorded 26 July by the Trawins are as follows:

- 1404 - singing nearby, entered nest and remained there for 3 min.
- 1420 - singing nearby, entered for 5 min, singing resumed as the bird flew out.
- 1440 - singing nearby, entered for 5 min, some shaking of plant leaves. Flew to camp roof to continue singing.
- 1455 - singing, entered nest for one min, leaves shook, flew out and sang on roof, then flew to ground.
- 1530 - singing in distance.
- 1544 - entered nest for 2.5 min, emerged dropping something off the edge of the planter, reentered for 30 sec, then flew 3 ft away to roof gutter and sang for 4 min, entered and left nest quickly, then off into hemlocks for more singing.

About 120 m northeast of the Trawin camp is the camp of Margaret and Samuel (Bucky) Cozine. On 27 August, Bucky told me he thought he had a Winter Wren nesting in a nestbox on his camp roof overhang. I arrived at 1600 and we watched from inside the camp. At 1620, a Winter Wren, presumed to be the female, appeared and spent 10-15 sec feeding young at the box entrance. There was no doubt about the bird's identity. Its tiny size, rich brown back, distinct buffy line over the eye, and very stubby tail clearly distinguished it from the larger, gray-brown House Wren (*Troglodytes aedon*), which nests occasionally at Jenny Lake.

We took down the nestbox and pried it open to photograph and band the 2 young. They had 2 well opened tracts of rich brown feathers on the back, brown feathered heads topped with a fluffy bloom of medium to dark gray down, and broad, not yet fully pointed bills with fleshy, bright yellow gapes. The bill of the larger bird had begun to show signs of becoming pointed. The larger bird had a wing chord of 26.0 mm and had feathering protruding about 1 mm beyond the primary sheaths. The other bird had a wing chord of 24.5 mm, and feathering was just emerging from the primary sheaths.

The nest was composed of the same very fine hemlock branch tips and green moss as was the Trawin nest. One twig that I removed was 7.5 cm. The nest completely and compactly filled the inside of the box. Two flight feathers of a Winter Wren were found in the nest along with some Blue Jay (*Cyanocitta cristata*) body feathers, and fine material resembling grass. The box containing the nest was a hollowed hemlock log measuring 15-16 cm outside diameter, 9-10 cm inside diameter and 15.5 cm high. It had flat bottom and top covers, and an open peaked roof over the top cover. The nestbox entrance diameter was 3.2 cm, centered 9.5 cm above the bottom of the box. Nesting material filled the bottom 1.8 cm of the entrance hole, making the entryway through which the wrens travelled 1.4 x 3.2 cm. The nestbox was hung from a rafter of the roof overhang such that the entrance hole was 2.1 m above ground, 38 cm from the side of the camp and 32 cm beneath the roof overhang. I photographed the box, the nest, and the young.

While at Cozine's camp on 2 Sep, I observed an adult several times feeding young at the entrance. At 1410 that day, I checked the nest with my finger and felt the 2 young inside. As I removed my finger from the nest, the young bolted from it and fluttered weakly to the ground 5-7 m away. Both were retrieved and replaced, and the adult was seen to feed them twice more with no apparent concern before I left. The larger bird now had a wing chord of 38 mm, the primaries having grown 12 mm in 6 days.

At 1030 on 3 Sep, I went to take more photographs of the camp setting. When I reexamined the nest, it was empty and cold. While there, I heard and saw an adult nearby. Early on 5 Sep the Cozines told me they saw one young back in the box and one on the box, both being fed by an adult. At 1125 on that day, I checked the box and both young were inside, but again bolted from the box when I removed my finger. This time they flew strongly, compared to 2 days earlier, and could not be retrieved. On the morning of 5 Sep the Cozines saw both young back

in the box being fed at the entrance. There were no observations made on 6-7 Sep. They saw them there again late on 8 Sep. I checked the box at 1030 on 9 Sep and found it empty, as did the Cozines on 10 Sep and I on 11 September, when observations ceased. The late evening sighting of the young in the box on 8 Sep was their last sighting there, and their presumed departure on 9 Sep represented the last of 6 days of intermittent use of the nest site.

The Cozine nest was collected and given to the New York State Museum at Albany. It bears accession number NYSM 8001. Color transparencies of the juveniles, and the Trawin and Cozine nests and camp settings were also placed on file at the Museum.

DISCUSSION

While this type of nesting behavior at the Cozine and Trawin camps appears unpublished for this species in North America, it is not without precedent in Europe and Great Britain. Dement'ev and Gladkov (1968) describe the traditional lowlying forest breeding locations in the Soviet Union, usually not more than 2-3 m above ground, but as high as 5 m in spruce trees, and make no mention of nestbox use. However, Armstrong and Whitehouse (1977) cite a Soviet reference that claims the wrens "make considerable use of nestboxes" in Russian spruce forests only where natural nest sites are scarce. Cramp (1988) and Armstrong and Whitehouse (1977) portray a much more varied selection of nest sites in western Europe and Great Britain, ranging from ground level up to 10 m, and including but not dependent on buildings and other human artifacts or artificial sites. Some of the nests the latter authors personally studied were in or near gardens in British suburbs, away from the more typical forest habitat. Cramp (1988) refers to a British study in which 5% of 170 nest sites occurred in a box or basket. Two out of 13 forest situated nestboxes intended for several species of tits (Paridae) at Batsford, England, in 1986 were occupied by Wrens (Sells, 1987). Mead (pers. comm.), using records of the British Trust for Ornithology, characterizes the use of nestboxes by Wrens in Great Britain as "uncommon, but certainly not rare," and adds that the use of previously used Barn Swallow (*Hirundo rustica*) nests in barns and outbuildings is fairly common. In the Tring area, he has encountered Wren nests in nestboxes at the rate of one every 2-3 years among 500-600 boxes examined, and in the Wales and Hereford area at 2-3 per year among 1100 boxes examined.

Bent (1964) describes most North American nest sites as on or near the ground. Eighteen out of 35 described nests were located in upturned roots of fallen trees and 7 were in or under rotten stumps. Among the others was one in a woodpecker hole and one in an unoccupied hut. Elevated nests were up to 1.5-2.4 m above ground, and those on branch tips up to 3 m above ground. No use of nestboxes is mentioned. The Nest Card Program at Cornell University's Laboratory of Ornithology contains 27 records of Winter Wren nests, three of which involved man-made structures. A 1971 record from Vilas County, Wisconsin, involved nesting in an "old rusty stove" 1 m above ground in a hemlock-maple forest at an elevation of 567 m. Two young were seen to fledge from the nest on 5 Aug in the presence of the parents. In a Balsam Fir-spruce forest near a bog in Oneida County, Wisconsin, at an elevation of 457 m, a nest was completed by 1 July 1975 on a "back eave under porch of tool house" located 8 ft above ground. By 10 July the nest, which may have been a mock nest, was believed abandoned. Competition from nearby Eastern Phoebes (*Sayornis phoebe*) was presumed to cause abandonment. Then on 24 July the male reappeared at the nest singing "loudly and continuously." On 21 Aug at least 2 young appeared at the nest hole, and one adult on 25 Aug. On 29 Aug, the fledged young were seen nearby for the first and last time. On 4 Sep when the nest was removed, it contained one dead young.

A 1981 nest in Pacific County, Washington was located in an air vent on a house, 2.4 m above ground, in a suburban area 1.5 m above sea level. Searching for a site was first recorded on 27 Mar, building on 5 Apr, visits in May and June with feeding last recorded on 28 June and a "quiet" nest on 30 June. When the vent was cleaned on 2 Aug, two nests were found. This nesting is difficult to interpret. The time span of observed activity and the finding of 2 nests suggest two possible nestings, or one nest and a mock nest. The 12-week period from building on 5 April to presumed fledging 28-30 June is difficult to explain.

The Huntley porchledge nest referred to here is unusual and draws its closest North American parallel in the loghut nest described in Bent (1964) and the Oneida County, Wisconsin and Pacific County, Washington, nests in the Cornell records. All of these are more in keeping with the occurrence of nests in British suburban gardens described by Armstrong and Whitehouse (1977).

Assuming no eggs or nestlings were discarded or destroyed, or died before the box was opened, this brood of 2 is unusually small. Bull

(1974) reports clutches of 4-6 ($n=14$) in New York; Bent (1964) reports 4-7; and Cramp (1988) reports a mean of 5.6 ($n=1115$) in Great Britain (range normally 5-8, but 3-9 known) with only 4% of these clutches having 2-3 eggs. Only one out of 90 Dutch nests held only 2 eggs, and the smallest of 44 Polish nests was 4 eggs.

Bull (1974) reports egg dates of 22 May to 7 July, with a second brood 29 July, and fledging 15 June to 16 Aug while Eaton (1912) notes possible second brood egg dates in the Adirondack Mountains of 16-25 and 29 July. Forbush (1929) indicates dates of 20 May to 23 July in New Hampshire and 20 May to 8 Aug in Maine. This Jenny Lake nest represents a New York State record late fledging date of 3 Sep. The continued use of the nest by the nestlings for 6 days until 9 Sep is consistent with observations in Dement'ev and Gladkov (1968) and Armstrong and Whitehouse (1977) though not mentioned in North America. The latter authors cite examples of 4 and 17 days nest use after fledging. The 3 Sep fledging date, using an average nestling period of 17 days and incubation period of 16 days (Cramp 1988; Dement'ev and Gladkov, 1969; and Armstrong and Whitehouse, 1977), translates back to a last egg date of 1 Aug, only 3 days later than the late egg date reported by Bull (1974) and Eaton (1912).

While I cannot be certain that the wren that tended the nest at Cozine's camp was the same wren I saw feeding a juvenile at the lake outlet, the distance from the confirmed second nest location to suspected first location was about 430 m. Cramp (1988) indicates that females move an average of about 200 m between successive nestings.

The apparent lack of reported North American Winter Wren nest locations in proximity to human habitation compared to such nests in Great Britain can perhaps be attributed to the following. New York State nesting is geographically limited and for the most part is concentrated in the Adirondack and Catskill Mountains at elevations above 305 m (Bull, 1974; and Bonney, 1988), where human population is sparse. In contrast, Cramp (1988) describes the British distribution as follows: "The most abundant and widely distributed bird species in British woodlands, both in summer and winter. One of the 3 most widespread species in Britain, and one of the most adaptable, found in almost every habitat from seashore to highest mountain boulder-fields." This description is certainly not fitting its status in New York, and given the denser British human population, and the Wren's abundance and adaptability, it may for these reasons exhibit different nest site selection behavior. The literature on the subject for the 2 races

appears to differ substantially, and nestbox nesting of this species in North America appears never to have been reported based on the data bases I have searched.

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