

## SOME BEWICK WREN NESTING DATA

BY AMELIA R. LASKEY

In fifteen seasons (1928, 1934, 1935, and 1937-46), I have accumulated some data on 52 nests of the Bewick Wren (*Thryomanes bewicki*) in the area about my home, Warner Parks, and the intervening five to six miles. These nests were located in the following sites: metal newspaper cylinders on posts at roadside, 13; mail boxes on roadside, 12; wooden bird boxes, 11 (including one stored on a shelf in a garage); on ledge of porch or similar protected place, 7; in gourds under eaves or on porch, 3; in crevice of building, 2; and in addition, one was located in each of the following four places: hat, fastened to the inside wall of a chicken house, cardboard cylinder fastened to side of a house; within a sack of peas stored in a barn, a horizontal drainage tile in a park terrace. In two seasons, Bewick Wrens and Carolina Wrens (*Thryothorus ludovicianus*) nested successfully in boxes on opposite ends of a porch about 25 feet apart. No conflicts were seen between the pairs.

The earliest of the 52 nests contained four eggs on March 30, 1942 (complete set 7), indicating the first egg was laid March 27. The latest nesting record is a brood of five young about nine days old on July 20, 1938, the last egg being laid about June 28.

The number of eggs laid is known for 22 of the 52 nests. There were three sets of 8 eggs (all April nests) with 6, 7, 7, eggs hatching and the 20 young surviving (83 per cent of the number of eggs laid). There were ten sets of 7 eggs (March to May). One of these nests was not followed, but the other 63 eggs produced 31 young (49 per cent). In addition, seven young were fledged from the drain pipe but the number of eggs in the clutch is not known. There were seven nests with 6 eggs, and two with 5 per set. The total number of eggs laid in 21 nests is 139, averaging 6.6 eggs per nest.

From the 139 eggs, 79 young were fledged or 56.8 per cent of the number of eggs laid. Six of the nests were entirely unsuccessful; a snake robbed one nest, the incubating bird was taken by a cat in one, in another, she was found dead, and from a fourth nest she disappeared. In two May nests, no eggs hatched, although there were well developed embryos. These nests were in metal roadside boxes that were exposed to the sun in very hot weather producing excessively high temperatures inside of the boxes.

Because most of the nests were built so far back in small, dark recesses, it has been difficult to get exact data on incubation and nestling periods. In one box, the set of six eggs was completed on June 27 and the first egg was hatched by 10 A.M. July 9, but no further data were obtainable as the contents of the nest were taken by a predator before my visit on the following morning. In another nest, containing six eggs, laying dates unknown, one nestling was hatched on the morning of May 8, but the sixth egg did not hatch until the afternoon of May 9. The young left the nest by May 22. On May 21, at 10:30 A.M., one of the brood had its head out of the entrance and two stood on the backs of others. Adults were still carrying food into the box on the morning of May 22, but all young had gone at my afternoon visit. In this nest, therefore, the nestling, or nest-occupancy, period was thirteen to fourteen days.

In May, 1946, there was an unusual case of Bewick Wrens usurping the nest site that was already in use by a pair of the larger Carolina Wrens. The Bewick pair had built in a mail box at the roadside about 150 feet from our mail box which the Carolina pair had taken sometime previously. On May 18, the property

owners removed the nest of the Bewick Wrens. Early on the morning of May 19, the Carolina Wren laid the fourth egg of her set in our box. This apparently did not complete the set for she did not start incubation. At 1 P.M. (C.D.T.) that day, I saw the Bewick pair diligently carrying loads of nest material into our mail box. Investigation revealed that they had a nest complete, except for lining, completely sealing in the eggs of the Carolina Wren. The new nest was built against the side entrance of the first nest. I watched spasmodically all afternoon and failed to see the original owners, but heard the male in songs occasionally in other locations about our home. Later, the replacement nest was found some 250 feet south.

The Bewick Wren nest appeared complete on May 20; the first egg was laid May 23 and the set of six completed on May 28. Two of the eggs had the heavy pigmentation in the form of a wreath around the small end instead of around the large end in the normal manner. Incubation began after the laying of the last egg, although she may have occupied the nest at night during the laying period.

Between May 30 and June 10, I spent 11.5 hours watching the pair at the nest box. From the beginning of their occupancy, both pairs had used the mail slot at the entrance, therefore, to protect the birds from interference, the door had been immediately wired shut and a substitute box placed for the mail. When incubation began, the female Bewick Wren had regular routes for leaving and re-entering the box. Usually, she flew south on her periods off the nest. As she flew out of the slot opening, she curved to the right, around the front of the box, to the east side, flying southward. Upon returning, she always landed on a scroll-work iron bracket below the box, then, flying upward on the west side of the box, she made a right turn and into the opening. Her trips were made in silence except once or twice when she used the rasping notes, apparently directing them at a person.

During my watch periods, I saw the male enter the box seven times. On five of these trips, he landed on the top of the box first before flying down to the slot and entering; on the other two trips, he flew directly into the box without stopping first. On five (possibly six) of his trips (May 30, June 2, June 5), he brought food. Twice he delivered it to the female, but she was absent on three of his visits. The first time that he failed to find her, he must have swallowed the spider himself for he came out without it; the other two times he came out with the larva still in his bill and flew off with it. He was silent on some of these trips but the third time that she was absent, he gave one musical call-note as he flew off with the food. Once when delivering food to the female in the nest, he gave the musical call before entering; on the other food delivery, he used the rasping scold many times, from a high perch behind the box, before entering. On June 2, just a half minute after the female had returned to the nest, he arrived from the south to the top of the mail box, leaned over the front edge to peer into the slot, then hopped about the box some seconds before returning to the front edge and leaning far over in an attempt to look inside. He was silent while at the box but sang five songs in a half minute after leaving. His singing occurred at some distance from the nest throughout the incubation period; I failed to see any correlation between his singing and the movements of his mate to or from the nest. His bringing food to her during her absence seems to indicate that she foraged alone, at least part of the time. In 1928, a pair of Bewick Wrens occupied a gourd on our porch. The male brought food to the incubating mate but often announced his arrival by stopping on the flower box and singing one song before proceeding

to the nest with the food.

In the 11.5 hours of daylight observation of the 1946 nest, the female spent only 37 per cent of the time incubating. In the 8 complete periods on the nest occurring during my watch, the time on the nest varied from 3 to 24.5 minutes (average 17.5 minutes). Among the partial periods (meaning she was on the nest when observations started) she stayed 41 minutes, plus. Her 9 complete periods off the nest varied from 12 to 63 minutes.

Doubtless weather conditions affect the incubation rhythm to some extent. During the first four days of incubation, with maximum temperatures of 79° to 84° F., in 192 minutes of observation on the third and fourth days, she spent 24 per cent of the time on the nest with 76 per cent off. From June 1 to June 6, maximum temperatures were 66° to 82°, with very cool nights for June. The U. S. Weather Report shows that on three of those twenty-four-hour periods, the departures from normal mean temperature were -12 and -13. During this period, I made observations on the 5th, 6th, and 10th days of incubation for a total of 314.5 minutes. She spent 53 per cent of the time on the nest and 47 per cent off.

But from June 7, the weather was abnormally hot with temperatures as high as 97°. The metal box, being in direct sunlight some hours during mid-day, must have registered well over 100°. On the 11th and 14th days of incubation, I watched for 141 minutes. She spent 23 per cent of the time on the nest (complete periods 3 to 20.5 minutes) and 77 per cent off (complete periods 14 to 63 minutes).

No eggs hatched. She incubated until June 13 (at least 16 days). Early on the 14th, when the eggs were found deserted, they were examined. One was sterile but the remaining five had large embryos, developed almost to the hatching stage but the excessive heat of the last days of the incubation period apparently was disastrous.

In two other metal boxes in exposed roadside situations, where the incubation of the two 7 egg sets was a few days in advance of the one in our box, three and four eggs, respectively, contained dead embryos. Another mail box, where nesting had begun in April, was highly successful. On May 18, 1946, the nest and seven well-developed nestlings were removed and brought to me, the report being that the postman and others failed to leave an opening for the parents on many occasions. There was one addled egg in the nest and the young appeared to be about 12 days old but varied in development. One nestling made a short downward flight but the youngest still had most of its flight feathers in sheaths. They were placed, with the nest, in a tall, roomy box indoors and fed by hand. Two gaped immediately and the others soon responded to my hand. Larva-size pieces of soft-baked custard became a favorite food. They were attractive little birds, using the twittering notes as food calls, quivering the wings and begging with open bills as they hopped about my hand. After a feeding, the seven settled in a compact group in the corner of the box, heads facing the same direction. In ten days (May 29) they took food in their bills, sometimes even grabbing it from the feeding forceps. The following day, one wiped its bill after a feeding and two grabbed food from the bill of a third. By May 31, they had been moved to a large cage on a screened porch and were helping themselves to food from a dish, although all still begged from my hand. They used the perches in the cage freely for daytime rests and roosted there at night, perched close together, usually facing in the same direction. Heads usually were tucked in the scapular feathers at night but sometimes one or two slept with heads hanging downward. June 1, the rasping note was heard on two occasions. On June 3, the temperature dropped at night

to an unseasonable 54°. Although the cage was covered, one fledgling was found dead the following morning. At 7:30 P.M. (C.D.T.) June 6, I peeped under the cover; they had not yet tucked their heads in but were perched close with heads alternating backward and forward. June 12, in preparation for releasing them, the cage, without the bottom, was placed on the grass near the house. For a few minutes, they appeared to be shy of the greenery but soon were making short, experimental hops down to it from the perches. June 15, when the brood was reduced to five (one had died during a very wet period, although protected from rain), they were given their freedom. They scattered about the garden this bright day, their cheerful twitters being heard from time to time. In the afternoon, two were foraging in the vegetable garden about fifty feet from the cage. One of these flew about a wire mesh cage back there that was occupied by a baby rabbit, twice entering it through the large-size mesh. Two stayed in the little rock garden near their cage. All were tame to me, coming close to eat custard strips as I placed some on the ground. On June 16, three were at their cage, going in and out and perching on it. Two allowed me to pick them up. June 17, two still came to the cage often to perch and feed. They frequently perched there for many minutes. One quivered its wings and gaped to my hand but did not take the proffered food. That night, at deep dusk, both were in the cage but did not remain for roosting. One of these remained in the rock garden until dark and must have roosted there. June 18, only one came to the cage during the day, and at dusk, hopped about investigating crevices near the steps. This was the last appearance. None had started to sing the lovely little warbling songs of immature wrens. Their vocal efforts were restricted to the oft-repeated "tweet-tweet," accompanied by waving of the tail.

#### SUMMARY

In fifteen seasons, records of 52 nests of the Bewick Wren have been obtained in Warner Parks, about my home and the intervening 5-6 miles. These were built in metal newspaper cylinders (13), metal mail boxes (12), bird boxes (11), and lesser numbers in gourds, on ledges, crevices of buildings, hat, sack of peas, drainage tile. The earliest nest had 4 eggs on March 30 (complete set 7); the latest had five young about nine days old on July 20.

In 21 nests, the number of eggs laid is 139, averaging 6.6 per nest. Sets varied from 8 to 5 eggs. From the 139 eggs, 79 young matured to fledging age (56.8 per cent); six nests were entirely unsuccessful, caused presumably by snake, cat predation, disappearance of female, exposure to extreme heat in metal boxes.

One instance occurred of a Bewick pair usurping a mail box in which a Carolina Wren was laying her eggs.

In late May and June, 11.5 hours were spent in observing incubation rhythm at this mail box which was exposed to sunshine during mid-day hours. The female spent only 37 per cent of these daylight hours on the nest. Her absences were more marked during a period of high temperatures. Extreme heat occurred on the 12th, 13th and 14th days of incubation. The eggs failed to hatch; five of the six eggs in the clutch had embryos about ready to hatch. She incubated 16 days before deserting. Other details of incubation rhythm and temperature are given.

The male brought food to the nest five times during the observation periods, finding her absent on three of these occasions; twice he carried the larva away with him.

Some details are given of a brood of seven nestlings, raised by hand from May 18, approximately 12 days of age. In ten days, they began to pick up food. All

reached independence but two died later. The five young were given freedom on June 15. No effort was made to tame them, but they remained nearby for three days, the number decreasing gradually. On June 17, one still gaped and quivered wings to my hand, but ignored the proffered food. They all used the "tweet" notes but there were no attempts to sing.

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## OBSERVATIONS AT THE NEST OF A PILEATED WOODPECKER

BY PHILIP S. HUMPHREY

It is not often that one is confronted with ideal conditions for the study of the home-life of any bird. However, for the first home-life study I have ever attempted I was presented with the perfect situation. The nesting hole was some thirty feet up in a dead tree and easily accessible by means of a sapling up which the most inexperienced of tree-climbers could readily scale. Furthermore, directly opposite the nesting hole and only ten feet away from the nesting tree, there grew a large tree in which a blind could be constructed or a camera placed to record the nest-life of that striking bird, the Pileated Woodpecker.\*

DISCOVERY OF THE NEST.—Before the nest was discovered, the woodpeckers were observed a few times in the vicinity of the nest during the latter part of March and the first week of April. These observations all took place in a rectangular area about ten acres in extent which was largely open hickory and oak forest with scattered low clumps of cedar.

On March 27, 1946, a three-inch hole, recently excavated, was found in a dead tree with only three limbs remaining. On the seventh of April it was discovered that this hole was being used by the woodpeckers. The nest was located in the dead remains of an unidentified species of tree some fifty feet in height. The hole faced due east and very little sunlight ever reached it through the canopy of leaves on neighboring trees.

The hole, thirty feet from the ground, measured three and a half inches wide by four and a half inches high, while the cavity itself was twelve inches deep from the lower lip of the orifice and seventeen and a half inches from the ceiling. An observation hole was cut after the young had hatched and it was found at that time that the cavity measured about seven inches wide at the level of this hole which was about one inch above the floor of the nest.

THE EGGS.—These were four in number, pure white, and glossy under their coating of filth from the floor of the nest-cavity. From the fact that two of the eggs hatched on the twenty-second of April and that the known incubation period is eighteen days it may be assumed that incubation began about the third or fourth of April. Two of these eggs failed to hatch and presumably they were infertile.

It is interesting to note in passing that at no time during the course of my visits to the nest did the adult woodpeckers show any inclination to attack me, nor did either of them remain in the near vicinity of the nesting tree once flushed from the cavity.

INCUBATION AND EXCHANGE PROCEDURE.—The nest was under observation for eleven hours during the last eight days of incubation. The female Pileated Woodpecker was in the cavity and presumably incubating the eggs for three and a half hours of that time, the male for two and a fifth hours and birds of undetermined sex

\*Southern Pileated Woodpecker (*Ceophloeus pileatus pileatus*.)