

NOTES ON THE NESTING
OF
A PAIR OF WHIP-POOR-WILLS

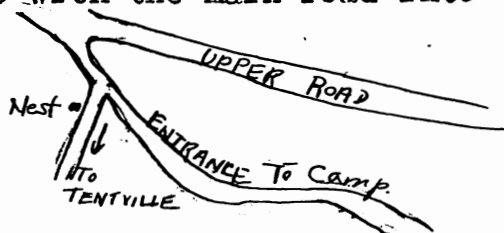
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Notes on the Nesting
of
A Pair of Whip-poor-wills

The Whip-poor-will, like the Nighthawk, in feeding habits is a bird of the air, but like the Nighthawk, makes its nest on the ground, if indeed, a flat place among the dead leaves could be called a nest.

The nest under observation was unusually close to camp, on the road connecting Tentville with the main road into the Station, about twenty-five yards from the main road, and twelve or fourteen from the side road.



The nest was found on July 8 by accidentally flushing the female who when disturbed gave a broken wing display, clucking and fluttering along on the ground, dragging her wing, and then taking short, low flights which took her farther away from the nest each time. The two eggs were lying on dead leaves under a Bracken fern, but in no way concealed by it. They were near the edge of little clearing in the young aspens, maples and [?]gray birches which form an open woods near the road. The eggs were white, with rather obscure lilac marking and a few distinct brown spots; one had very few markings, but the other was more heavily marked. From a little distance they appeared white. In comparing the eggs of the Nighthawk and Whip-poor-will, Glover Allen says, "The Nighthawk lays a speckled egg that closely simulates its background and so is not conspicuous when exposed, yet its close relative the Whip-poor-will

with a similar habit of nesting on bare ground, lays nearly white eggs with a few pale blotches only. The difference may be correlated with the difference in their habits for the former often flies by day, but the latter is, I think, much more strictly nocturnal, and sits closely all day, concealing its tell-tale eggs*. The eggs measured 28×18 mm and 31×20 mm.

The nest was observed for two days without a blind, and then (July 10) a blind was erected about 12 feet away. The total number of hours spent in watching the birds was $53\frac{1}{2}$ of which $27\frac{1}{2}$ were with a lantern or flashlight. (This includes three all-night observations). During the period of observation the nest was visited daily.

There was no difficulty in recognizing the female for she lacked the conspicuous white outer tail feathers of the male, and the band on her throat was creamy buff in marked contrast to the white band of the male, as I found when I had a chance to see the two together later and compare them.

Brooding was done entirely by the female, who, except when flushed, remained on the nest day and night. She sat nearly always in the same position with the long axis of her body on a line that would have bisected the intersection of the two roads; however, if the roads influenced her choice of position, it seems strange that occasionally she faced in exactly the opposite direction (but on the same line). Sometimes she faced more nearly toward the main road. Usually she brooded with her eyes partially closed, opening them at any sudden motion, and showing she was not asleep; occasionally

* Allen, Glover - *Birds and their Attributes* - p. 79.

her eyes were completely closed and she seemed to be sleeping. She would remain motionless for an hour at a time, often, and then move only slightly, rocking back and forth as if turning the eggs with her feet. (Only once did I see her use her bill to turn the eggs) The eggs lay lengthwise to the long axis of her body and parallel to each other, unless she left in a hurry and disarranged them. During the daytime she was not disturbed by noises such as caused by snapping of fingers, coughing, talking, singing or clapping of hands. Passing cars did not seem to bother her, although she would sometimes sleepily open her eyes when one went by. Toward dusk she was more alert.

If there was any one time when she was more "motionless" than another, it seemed to be on the hottest days. Even with the location of the nest in mind it was some times hard to see her at first when I entered the blind, so perfectly "obliterative" was her coloration, and anyone else who came into the blind had the greatest difficulty in locating her. As Herrick says, "The Whip-poor-will lays two white delicately spotted eggs which are conspicuous enough whenever we chance to flush the 'fallen leaf' that so sedulously covers them....No oblitative coloring is needed when so close a sitter pictures upon her body with microscopic fidelity the subdued coloring of the forest floor, and in pattern which as Abbot Thayer tersely remarked is 'precisely similar to none, yet amply fitting all'".

I could enter the blind from the rear of it without disturbing her, but if I approached in front of the blind and more than three feet closer to her, she flew off the nest with a sharp cluck and dropped to the ground a few feet away, flutter-
1. Herrick, Wild Birds at Home.

ing about, dragging her wings, and uttering a single note of distress again and again. Usually she did not go far away nor fly high, but some times she perched crosswise on a small, low branch. With each "cluck" her head went up and down and her throat puffed out. Sometimes she would vibrate her throat rapidly, otherwise sitting so still that only this pulsating gave any indication of her presence; she would continue this sometimes for five or ten minutes at a time. At first when flushed she stayed away from the nest an hour and a half or two hours, but after the blind was up she would usually return in fifteen to thirty minutes. On rainy days it seemed to me that she left the nest more reluctantly, but whether that was because of a greater desire to protect the eggs or because I made less noise approaching on the wet leaves, I do not know. She did not return much sooner at those times.

She left the nest voluntarily only at dusk and dawn, between 8.40 and 9.00 p.m., and between 4.15 and 4.50 a.m. (usually at 8.45 p.m. and 4.40 a.m.), remaining away for from 15-25 minutes. Usually she gave one "cluck" and flew off directly. Sometimes she went silently, but I never saw her crawl away from the nest before flying as has been reported. On returning she would drop down nearby, give a cluck or two, and drop down on the edge of the nest, before settling herself on the eggs. On one occasion she turned the eggs with her bill and feet before settling on them. These clucks she gave were similar to the call notes that I heard her give to the male later, but only once before the eggs hatched did I see the male. The first night I found the nest she flew in for a few minutes, but as I did not have the blind up

I could not get close enough to see whether he brooded the eggs or whether she remained on the nest. It was practically dark on the ground, but as he flew I could see distinctly the white flash of his tail feathers. At other times he stayed nearby singing. One bright moonlight night he sang until about 2.30, when the moon went down, and started in again about 3.30, and that same night when I left the blind once or twice he started a distressed clucking from very near, keeping it up for twenty minutes until I went back into the blind.

The incubation period for whip-poor-will eggs is variously given as 14 days (Audubon), 17 days (Burns), 19 days (Atwell), and 24 days from the laying of the second egg (Roberts). The eggs in this nest hatched on July 20, twelve days after the discovery. Unfortunately I was on an all-day field trip, and so was not present when they hatched, but when I visited the nest at seven o'clock that evening I knew at once from the actions of the female what had occurred. She was on the nest but moving very restlessly. She let me get very much closer than usual before leaving, gave voice to louder clucks, and stayed very close while I was examining the chicks. One shell was not in the nest; the other was in two pieces, very neatly and cleanly broken about one-third of the way from the larger end. I removed it, and later put it back, but crushed it in so doing; it was never removed.

The young birds were covered with golden brown natal down with bare spots on the back, under the wings and knees. When picked up they "mewed" like kittens. The yolk showed plainly on the right side of the body. It gradually disappeared, the last trace showing when they were five and six days old. Their eyes

were not open but they could walk. When I went down to the nest at ten o'clock that night, the female tried to lead them away and they were following her.

The male appeared almost immediately, and all the time I was putting up a fence around the nest, both birds stayed near, clucking and flying about very low. The fence was made of cheesecloth, about 2 feet high, and forming an enclosure approximately four by five feet, as shown in the accompanying picture.



From this time on the male took part in the care of the chicks. The female brooded them all day and night but at dawn and dusk left for from fifteen to thirty minutes. I was never able to find the male during the daytime, hunt as I would, but each evening he appeared at about 8.45, not always, however, coming from the same direction. The usual preceding ^{the} was then as follows:

The male gave the whip-poor-will call a couple of times.

The female gave a cluck in reply.

The male flew near the nest, sometimes so close to the blind I could hear his wings. (Ordinarily they both flew silently). Sometimes he alighted on one of the guy ropes of the blind and went from there to his favorite perch in a maple tree nearby. Then the female would leave, and almost immediately the male would fly to the nest, feed ^{the chicks} and brood them for about fifteen minutes. Both he and the female always flew into the nest and left it from the same direction, on the side of the enclosure

toward the blind. Then the female would return, cluck from a nearby tree, he would leave and she would come in to the nest and feed the chicks, stay about five minutes and leave for another fifteen, while he took her place. She fed sometimes one and sometimes both young each time she came to the nest, but on some occasions she stayed away only for one interval instead of two. Twice it seemed to me that one of the babies climbed on the back of the male and brooded there for a few minutes. The two parents were both on the nest only once when the male did not leave immediately on the return of the female, whereupon she flew in from the side opposite to the blind, and almost knocked ^{*} him off the nest in her haste. He left as she landed.

The feeding was by regurgitation. The young bird grasped the parent's bill between his, his "mews" changed to a high squealing, and by a fluttering of tiny outstretched wings he kept his balance. Both parents when feeding the chicks kept up a continuous soft, guttural chucking which had the effect of coming from deep in the throat and was quite different from the ordinary clucks. *There was no nest sanitation as ordinarily they would leave the site immediately.*

After feeding time, the male usually stayed nearby, often singing or if quiet he would fly at me with clucks of distress when I left the blind, showing that he was "on the job". I am not sure that he always assisted with the morning feeding which took place about 4.40. (At least once he did not show up).

The familiar call of the Whip-poor-will consists of three notes, the first a clear, ringing whistle, the "poor-will" or "poor-wee" or "poor-way" a reedy, vibrating utterance with emphasis and a rising inflection of the last syllable. This particular

* He was usually more restless on the nest than she, turning his head about and moving his body.

bird invariably said "whip-poor-wee". The loudness and rapidity of his calls seemed to be correlated with the weather. There were none in bad weather, scarcely any on windy nights. The calls were most frequent on warm, calm evenings and on bright moonlight nights they kept up almost all night.

The number of calls varied from 18, 28, 31, 38, 41, 50, 58, and 78, to 120, the average number without even a tiny pause being 28. Saunders in his "Guide to Bird Songs" says, "When one is near the singing bird he may sometimes hear a short explosive 'tuck' before the first whistled note of the phrase". In this case not one, but 2, 3, 4, or 5 short clucks preceded each calling.

The speed also varied from one in every second and a half to so rapid they could not be counted. It sometimes seemed as if the singer got going so fast he stuttered; then he would stop and start in slowly and deliberately. Sometimes he said "Whip-poor-wee, poor-wee, poor-wee, poor-wee, poor-wee". Once when "tuning up", he said "Whip-poor-wee, whip-poor", and stopped in the middle of his song when the female called to him as if to remind him of household duties. As the season advanced, the calling became less frequent, with longer intervals between each Whip-poor-wee".

After making notes to this effect, I found Dayton Stone's report of a study of Whip-poor-will calls which showed definitely that the average number diminished with the advancing season and also that the calls became more and more labored and irregular as the energy and incentive for protracted calling was lacking toward the close of the breeding season. He also found that the hour at which the evening calls began averaged earlier (by the clock) as the season advanced, and that the interval between the series of calls increased.

Two days after the eggs hatched I moved the blind within two feet of the enclosure. That night when I visited the nest, both birds flew about very low, flying at me, and hovering in one spot with wings vibrating rapidly to maintain their positions. This was the only time I saw them behave in this fashion.

I was still able to enter the blind from the rear without disturbing the female. However, when I flushed her to weigh and measure one of the young birds, she stayed away for longer and longer intervals. When I visited the blind without flushing her, I found her more and more often outside the enclosure calling to the chicks and trying to get them through the fence. The calls she gave on these occasions reminded me of a hen with her chicks. I represented them in my notes as follows:

— — — — — / / / — — — — — / / /
Cluck cluck cluck cle-wuk-clewuk cle-wuk

At times she sounded very exasperated because of their failure to follow her, her calls coming closer and closer together, and she herself flying at intervals of scarcely a minute from one side of the enclosure to the other. Even on rainy days she was often outside, and the chicks were cold and wet. One terrifically stormy day (Monday, July 26) she brooded them, but on the next day which was also rainy, one was dry and the other was cold, wet, and pecked. The female was nowhere in sight. (It was not the one I had marked to weigh that was pecked). Both chicks kept up a continuous "mewing", sometimes with their eyes and mouths both closed. I warmed them up until 8.30 p.m., with still no sign of the female, and then put them back in the enclosure. At 8.45 the male arrived, called enquiringly and flew around the blind and enclosure several times; finally he alighted and fed the chicks. They snuggled under him but still cried as

if hungry. He left at 9.00 as usual and sang, but came back at 9.15. I left at 9.25 to get a flashlight, blanket, hot-water bottle and a fur-lined glove, so that if the male left I could keep the chicks warm without taking them out of the enclosure. ^{When I returned} I could see by the flashlight that a bird was on the nest, but could not tell which it was, so I stayed in the blind all night. In the light of a flashlight, the eyes of a Whip-poor-will glow like red coals. At dawn I found that it was the female on the nest, and who evidently had been there since my short absence the night before. One of the babies was under her, but the other was lying in front of her, and looked dead. On closer examination I found he was more pecked and there was fresh blood on his wing. I took him home and warmed him up so that he started chirping faintly, but while I was at breakfast he died.

After this I did not take the other chick out of the enclosure, but the female was more and more easily alarmed, and stayed away longer or tried persistently to get the chick through the fence, flying from one side to the other, and he answering her calls and trying to find a way out. In the earlier history of the nest, I had observed it with a lantern, placing the lighted lantern in the enclosure at 7.30 or 8.00 o'clock while there was still daylight. The birds had not seemed to mind it. Now, however, they would not come in the enclosure while it was there. Saturday night, July 31, neither bird came around, even with the light gone. I waited until 10.30 without hearing the cluck which usually announced their presence somewhere in the vicinity. As I stood outside the blind, one of them flew at me out of the darkness suddenly, so close I could feel the air from its wings.

I left very quietly without turning on a flashlight. I debated whether to take the fence down and let the chick go, but since I thought the parents had returned permanently, I decided to stay away for a couple of days, and see if they would remain. However, when I went back on August third, the second chick had died. I visited the nest a couple of times at dusk but the parents, to my knowledge did not come back to it.

CONCLUSIONS

From the reports I have heard of the nesting of the Nighthawk I should say that the Whip-poor-will, while closely related, is shyer and more easily alarmed. (I was never able as was Mr. Mathiak, to put the lantern in the enclosure without disturbing the bird, no matter how slowly I approached.)

It might be possible to observe a Whip-poor-will's nest with a larger enclosure than I had. Once I found the female brooding the chicks at one side of the enclosure, although ordinarily when I placed them in the original nest she would return to them there if she went back to the enclosure at all. I feel that the location of my nest may have had a good deal to do with the deserting of it by the parents. Several people told me they went there in my absence, and doubtless others were attracted by the conspicuous blind and fence so close to the road. Also the very bad storm, coming as it did when the chicks were so small, may have weakened the first chick.

The brooding instinct in the female seemed to increase until about two days after the chicks hatched, and then diminished. The day before the eggs hatched, she returned to the nest in five

minutes after I went into the blind - the shortest time within which she had returned. She sat on the edge of the nest for five minutes and then went back on the eggs. The day after the eggs hatched, she returned in five minutes to the chicks.

DEVELOPMENT OF THE YOUNG

When hatched they were covered entirely with down, but otherwise were quite altricial, being blind and helpless. Their ability to follow the female has already been mentioned. The feather tracts showed plainly on back and wings. The front of the tarsus was covered with down, the back bare. There was a lighter spot on the head, and one on the throat. Their tube-like nostrils were rather conspicuous, and there was a whitish egg tooth at the tip of the upper mandible.

As seen by the appended chart, there was a gradual increase in weight until the last two days. By the fifth day the pin feathers on the wing were 6 mm. long. They showed first on the primaries, then on the secondaries and finally on the tertiaries. In ^{two weeks} the right wing increased from eight to twenty-four mm. and the length of the whole body from fifty to sixty-five mm.

Chart Showing Development of Young Whip-poor-will

<u>Date</u>	<u>Weight</u>	<u>Rt. Wing</u>
July 20	5.68 gr.	8 mm.
July 21	7.21 gr.	9 $\frac{1}{2}$
July 22	7.61 gr.	10
July 23	7.64 gr.	11
July 24	8.235	12 $\frac{1}{2}$
July 25	10.70	13
July 26	9.45	13
July 27	8.36	14 $\frac{3}{4}$
Aug. 3 (dead)		24 mm.

Daily Development of Nestling

Name of bird

Date July 20 Record by

Locality

Weight	5.68	gms.	Primary	mm.
Length	57	mm.	Foot-body	mm.
Tail		mm.	Tarsus-toe	mm.
Bill	2	mm.	Foot	mm.
Bill-eye	9	mm.	Right foot	
Bill-gape	10	mm.	No. Toe	Nail
Bill-nostril	3	mm.	1.	
Eye-diam.	6	mm.	2.	8
Extent	7	mm.	3.	
Wing rt.	8	mm.	4.	

Appearance of feathers and changes in behavior.

Daily Development of Nestling

Name of bird

Date Aug. 4 Record by

Locality

Weight		gms.	Primary	mm.
Length	65	mm.	Foot-body	mm.
Tail		mm.	Tarsus-toe	mm.
Bill	4	mm.	Foot	15 mm.
Bill-eye	8	mm.	Right foot	
Bill-gape		mm.	No. Toe	Nail
Bill-nostril	3	mm.	1.	4
Eye-diam.	8	mm.	2.	6
Extent		mm.	3.	12
Wing rt.	65	mm.	4.	6

Appearance of feathers and changes in behavior.