

Report of a Towhee's Nest

University of Michigan Biological Station

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On July first and second at about four P.M., I walked on the hill in back of the Biological Station in search of a nest. The loud outbursts of Towhees that came from a male resting on the lowermost branch of a pine tree attracted my attention. The pine tree was located where the hill slopes downward. The bird was not shy. I approached him closely but he was so absorbed in telling the trees his story that he scarcely noticed me. After a while he flew to a nearby pine tree and resumed his outbursts of song.

Nest

On July the third, 1933, a nest of a Towhee containing three eggs was reported. I immediately went to the region only to find that it was in the close vicinity of where I had been on the preceding days. The nest was inconspicuously placed one foot from the ground in a low beech seedling. It was bulky, consisting of coarse grasses and leaves on the outside and finer grasses inside. The measurements were:

Inside width--four inches
Outside width--five inches
Inside depth-- two and one quarter inches
Outside depth--four inches

On all sides except the east, the nest was surrounded by aspen and oak trees. The region was, in general, a woody one.

Eggs

Two of the eggs measured .99x.75 and were pale buffy pink irregularly blotched with brown spots concentrated mainly on the larger end. The smaller egg was situated halfway between the other two eggs. The position of the eggs varied from day to day.

Erection of the Blind

On July the fourth, the bird blind, consisting of white canvas was set

up. It was placed three feet away from the nest in the region east of it where conspicuous vegetation was lacking. It was also in this direction that the female Towhee faced when sitting in the nest. Sometimes she faced northeast or southeast, at any rate, always in an easterly direction. The female and male sat on nearby branches during the erection of the blind, calling to each other.

Incubation Period

On July the fifth, at seven P.M., I entered the bird blind. The bird was slow in moving, but when she did, she went to the ground, hopped along on it and alighted on a low branch of a nearby tree. She then began a series of Towhee calls, whereupon the male, who was on an opposite branch responded by Towheeing also. He then flew to the female. They then flew to various branches surrounding the nest until they rested on a branch a half a foot away from the nest. The male flew to the edge of the nest and then back beside the female. The female did likewise. They then began uttering some soft chirping notes for about five minutes. I was greatly impressed with this twitter for it would have puzzled me as to what bird it was, should I have been a passerby.

The female then flew back to the nest after being reassured that she was safe-so it seems. The male remained stationary for a time, then towheed, and went back to his original branch where he was resting before I had entered the blind. From July the fifth until July the twelfth, I approached the nest at irregular periods of time. I rarely heard the song or the call of the Towhee, and I seldom found the bird on the nest. For seven days I thought my nest was deserted. Dr. Blanchard, however, consoled me by making me realize that the warm weather we were having was probably responsible for the birds leaving until more favorable weather occurred.

Hatching

On July the fourteenth, I was greatly disappointed on viewing the nest. First, there was only one young present, sufficiently covered with down not to have hatched that day. Frank Hinds, however, had observed the young newly hatched on July the thirteenth. Secondly, I was unable to learn the contents of the dissimilar egg as no trace of egg shells was anywhere. It is very possible however, that it was a cowbird's egg, according to Birds of Louisiana, Bulletin #20. The Towhee's egg is a little smaller and not so pink.

Additions of Young to the nest

On July the sixteenth, a Red-winged blackbird's nest containing young was found at Burt Lake marsh. Since the young were about the same age as the Towhee, it was decided that I place one of them in the Towhee's nest.

At five-thirty of that day I was greatly surprised upon placing the Red-winged blackbird's in the nest, for a small bird with gray down was nestled close to the young Towhee. Helene Dedrick had placed it there. She had found it in a Least Flycatcher's nest. I was greatly amused with my assortment of birds for I now had a cowbird, Red-winged blackbird, and a Towhee. The birds ranged in size and development as follows. Towhee largest, next Redwinged blackbird and then cowbird.

Feeding

On July the seventeenth at seven A.M., I entered the bird blind. The female was brooding her young. A few moments later the male approached a near by branch and called the usual Towhee note. At this time the female promptly left. The male scratched in the ground and returned in ten minutes with a caterpillar. The young Towhee was fed first and given the largest portion of food. The other two were fed regurgitated parts of the caterpillar. He then left the nest. About ten minutes later the female returned with food. She fed the young Towhee most of the food and then flew away. Ten minutes later the female returned, escorted by the male. The female, having food, flew to the nest, fed the young,

and then brooded them while the male sat on a nearby branch and sang.

In a short while the female flew off the nest and together with the male sang and fluttered about the nest. The female returned to the edge of the nest and the male to his favorite branch towheeing. The female perched at the edge of the nest for fifteen minutes, staring all the time at the young and twisting her head as though she were trying to interpret her brood. She then settled on the nest, at which move the male flew away. In a short while the male returned to the nest with food. The female flew away. The Towhee was not fed during this visit.

The female returned next, with food, feeding each young bird the same amount. She stood at the edge of the nest before settling on the young. She found it difficult to sit on them as they were exceedingly active, stretching their necks through her feathers. The female then flew off the nest as the male returned, scratching in the ground. Upon finding a caterpillar, the male flew to the nest and fed it entire to the Towhee, who struggled with it. Upon seeing this, the male snatched the food from the young bird and flew away with it.

The food fed to the young consisted of caterpillars. It was gathered within a short radius of the nest. The birds made considerable noise when searching for food, giving me the impression that a rodent was attacking the nest. The male and female alternated in feeding the young. The female was always more hesitant about approaching the nest than the male and would sit at the edge of the nest looking at the young after feeding.

All fecal material was removed by male and female during feeding.

Between seven A.M. and 11 A.M. the young were fed seven times. Usually the birds uttered soft notes before entering the nest to feed the young.

On succeeding days the adults were seldom near the young. Perhaps the warm weather interfered with their feeding the young. Possibly it was attended to in the evening for upon visiting the nest at eleven P.M., I found the young female perched at the edge of the nest. While the birds were search of food, another female Towhee was also nearby. She occasionally flew with the other birds and did precisely what they did.

Shyness

The birds were not nervous when I approached the blind. I once attempted to walk up to the nest while the female was in it. She was slow in moving away.

On July the fifth, three days after hatching, I crawled up quietly to the nest and sat beside it. The bird looked about but refused to move until ten minutes later, a strong wind almost threw her from the nest. One week later I approached the nest to find neither parent about. I removed the young Towhee from the nest. It was at this time able to squeak. As soon as it did so, the parents appeared, fluttered around my head, hopped up and down on the ground, spread their wings in anger and screeched loudly. This attracted, chickadees, a brown thrasher, chipping sparrows and a robin. There was so much noise and excitement that I decided to leave.

At one time while the male was feeding the young, a nighthawk flew nearby. At this, the feathers on the head of the male became crested and he flew to a high branch on a nearby tree.

Development of Towhee

July 14

1. Gray down present
2. Beginning of primaries
3. Throat pink
4. Body with orange color
5. Bill color not distinctive
6. Eyes closed

July 16

1. Regions of gray down increased
2. Sheaths of feathers becoming apparent
3. Sheath of first primary 3 mm long
4. Eyes closed

July 17

1. Sheath of first primary 3.25 mm long
2. Appearance of new sheaths and feather tracts on back of head, flanks, back, neck and sides of breast.
3. Eyes closed

July 18

1. Eyes open
2. Feathers on back taking on brown color
3. Increase of feathers
4. Breast appearing lighter than back.

July 19

1. Breast feathers showing distinct buffy color and increasing in number, particularly in neck region
2. Down disappearing.
3. Feathers increasing in size.
4. Bill becoming yellowish

July 20

1. Increase of feathers, those on back becoming tipped with buffy. Those on breast becoming tipped with brown.

July 22

1. Back brown with lighter streaks
2. Breast buffy with brown tipped feathers.
3. Iris brown
4. Bill horn color.

Comparison of the young

The Redwinged blackbird and Towhee appeared very similar except that the breast of the Redwing was much darker, streaked with buff and the back feathers were blackish brown.

The cowbird was a definite gray plumed bird.

Departure of the Young

On July the twenty-second, it became apparent that it was time for the young to leave the nest. At seven P.M., I returned the young Towhee to the nest after measuring it. It was very active, stretched its wings and squeaked loudly. It hopped to the edge of the nest as soon as I tried to place it in the nest. The female Towhee flew from a branch to the ground just below the nest. After five minutes of hesitation, the young flew awkwardly down to the female bird. The male Towhee then flew to the edge of the nest, while the female led the young Towhee away. While the young was hopping after the adult, the latter uttered continually, a note which can best be described by stretching and loosening a rubber band. That was the last I saw of the Towhee, although I waited in the blind, thinking that the young bird might be led back to the nest.

On July the twenty-third, it rained all day. In the evening I visited the nest, not expecting to see the remaining birds. The cowbird was still in the nest, and three feet away, on a branch, four feet from the ground the Red-winged blackbird was perched, I attempted to put it back in the nest, but it only hopped out again on a branch extending from the nest. The young cowbird also hopped out and nestled near the Red-wing. I tried to get hold of the Redwing but it scratched me endeavoring to remain where it was. During this time the male Towhee sang on a nearby branch.

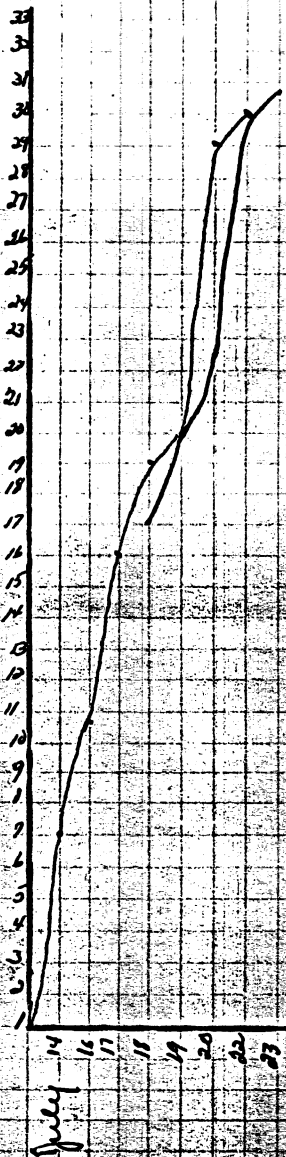
At 7:15 P.M., I returned to find the young in much the same position, but the Redwing was answering loudly the calls of the male Towhee. The Towhee then hopped on a branch supporting the nest. The young Redwing, at this, kept turning about and stretching his wings. He was also chipping more vigorously than before. The young cowbird was also peeping. The adult then left the nest. The young

became quiet. When he returned to the nest, the Redwing attempted to fly but only succeeded in landing on a leaf near the nest. It then began screeching and flapping its wings. The male Towhee kept flying from the nest to a near by branch. At the same time the young always flapped its wings and moved a little further from the nest. The male then flew near the Redwing and pushed it with its head. It repeated its action again but also poked its bill into the young Redwing's mouth which was wide open, as it was screeching. The young Redwing looked very miserable. It tried to return to the nest but the parent poked it away. Finally, the Redwing decided to follow the male Towhee. It flew or hopped to the ground. The Towhee tried to lead it away but the Redwing refused to move. It only flapped its wings. When it did decide to move, it went in the direction of its own choosing.

The Towhee then flew to it and poked it. The Redwing then decided to follow the Towhee by hopping after it on the ground. When the cowbird was left alone it began to be noisy but the birds did not return.

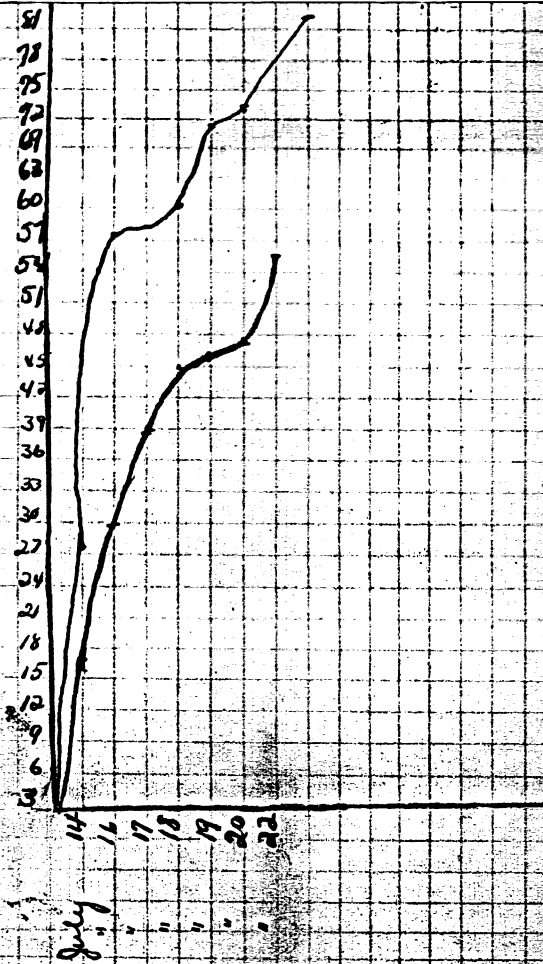
On July the twenty-fourth, after a stormy night, I visited the nest at 6 A.M. The cowbird was still in the nest. I remained in the blind until 6:50 A.M. but there was no trace of the parent. At 7:30 A.M. , I returned to the nest to find the cowbird gone.

On the following morning I returned to the nest but found the site permanently deserted. A few feet away, however, I saw a Towhee, which perhaps belonged to another nesting site. I searched the vicinity but found no trace of the young and on the following days did not see the adult birds either.



Weight increase of Towhee —

Weight increase of Red Winged Blackbird —



Growth Rate of Tarsus Toe —

Growth Rate of Foot Body —

Date	Weight	Growth of a Towhee					Eye-diam.
		Length	Bill	BillEye	Bill-nostril		
July 14	7gm	48mm	4.5mm	7.7mm	---	3mm	
July 16	10.8gm	55mm	8.5mm	9.75mm	3.94mm	5mm	
July 17	16gm	62mm	9mm	10mm	3.94mm	5mm	
July 18	19.3gm	72mm	9.75mm	11mm	4.5mm	6.25mm	
July 19	20.8gm	80mm	9.75mm	11mm	5mm	7mm	
July 20	29gm	85mm	11mm	12.5mm	5mm	7.2mm	
July 22	30gm	90.5mm	13mm	12.5mm	5.5mm	7.5mm	

II

Date	Bill-Gape	Extent	Foot-body	Tarsus-toe	Toe1	2	3	4
July 14	8mm	50mm	28mm	17mm	2			
July 16	13mm	64mm	56mm	30mm				
July 17	14mm	73mm	57mm	39mm				
July 18	15mm	82mm	60mm	45mm				
July 19	15.5mm	89mm	70mm	46.5mm				
July 20	16mm	95mm	73mm	47mm				
July 22	17mm	100mm	83mm	55mm				

III

Date	Toe1	Toe2	Toe3	Toe4	Nail1	Nail2	Nail3	Nail4
July 14	2	2	3	2	.5	.5	1mm	.5mm
July 16	5	7.5	10	6.5	3.5	2.5	2	2
July 17	8	8.5	12	8.5	4	3	3	3
July 18	10	10.5	16	9	4	3	3.5	3
July 19	10	10.5	13.5	10	4	3	4	3.5
July 20	10	11.5	15	11	5	4	4	4
July 22	11.5	13	29	11.5	5.5	4.5	4	6