

OBSERVATIONS ON THE ACTIVITIES OF NESTING  
CEDAR WAXWINGS AND KINGBIRDS FOLLOWING  
THE TAKING OF THE MATE

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This work was undertaken as the result of an article by Dr. Arthur A. Allen appearing in the Auk, giving evidence that certain kinds of nesting birds quickly remate when the mate is taken. The aim of the work has been to discover the reaction of male and female cedar waxwings and kingbirds when the mate is collected during the nesting period. The problem was suggested by Dr. Frank N. Blanchard and has been carried on at the Station during the summers of 1926-27 and 28.

In all twenty two nests have been under observation. Of the birds collected fourteen have been waxwings, nine of which were males and five females. Eight of the nests were found in maple trees or clumps and six in apple orchards. Five of the nests contained eggs and nine contained young. Four of the nesting attempts were completed successfully and one nest is still under observation. A high mortality of waxwing nests has unfortunately occurred during the present summer. Rainy periods following the taking of one of the pair have been disastrous to the young and largely

due to this only one nest of six has been successful. Another is still under observation.

Six kingbirds were collected, four males and two females. Four of the nests had young and two contained eggs. Five nests have been completed. Two robins, both males, have been collected. Each nest had eggs. One of the nests was destroyed, but one was successfully completed.

There have been three cases of remating.

A complete report is to be given the Station later either in typewritten or printed form.

## Study of Remating of Nesting Birds.

Made at U. of M. Biological Station, Summer of 1926.

R. E. Yeatter

Species	Sex	Taken	Date	Nesting Activity	Evidence of Remating	Time
1. Cedar Waxwing	Male		July 17	Young	Good	10 da.
2. Kingbird	Male		July 19	Young	Fairly good.	1-3 "
3. Cedar Waxwing	Female		July 28	Eggs	None. Eggs abandoned	
4. Cedar Waxwing	Female		Aug. 4	Building	None	
5. Robin	Male		Aug. 8	Eggs	Nest found rifled Aug. 13.	

This study was begun in the summer of 1926 to gather data on the remating of one of a pair of nesting birds when the mate is taken. Observation was begun previous to the taking of one of the birds, to determine its activities with reference to the nest, and carried on for several days afterward and the reactions of the remaining one observed. The work is to be continued at the station in the summer of 1927 if circumstances permit.

#1. On July 17 I took the male of a pair of cedar waxwings that I had observed for advanced ornithology. This was two days after the youngest bird had hatched. At this time the male was bringing part of the food which the female fed to the young.

Three waxwings were seen near the nest on July 20. However, on July 21 the female was under observation for an hour, during which she was alone. Furthermore for three or four days following this she took care of the young alone.

On July 27 four waxwings were observed close to the nest. While I watched from the blind the female came to feed the young, and another bird in a nearby tree gave the characteristic call which the male I had taken gave when the young were being fed. This and the fact that after this one (sometimes two or three others) other bird was always seen at the nest with the female, I considered evidence of remating.

#2. I collected the male of Mr. Gorhans pair of nesting king birds on July 19, the young then being about two weeks old.

Two birds were seen about the nest on the following morning, July 20. The nest was observed 4 P.M.-5 P.M., July 21, during which time the female was alone at the nest.

At 5:30 A.M., July 22, two kingbirds were found at the nest. Both sat in the tree by the nest, acting like a pair guarding the nest. There is some possibility that the second bird might have been one from another pair - but because of the fact that I had seen two together on two mornings, and that this morning they returned to the tree after flying away, I concluded there was fair evidence of remating. Flying of the young prevented further observation.

#3. A pair of cedar waxwings were observed during the forenoon of July 27. A set of five eggs were being brooded. The male brought food three times to the female during the forenoon. The next morning, July 28, the male brought food three times from 6 A.M.-6:45 A.M.

At 11 A.M. July 28 the female was taken. The male came at 11:40 to the edge of the nest, flying away immediately as if startled by the absence of the female. He returned very

soon with food. He repeatedly gave a cricket-like call. His agitation was evident as he flew from one to another of the surrounding trees, evidently searching for the female.

On July 29 I came at 6:30 A.M. and found a bird on the nest, which flew away when I came to 25 feet from the nest. This was contrary to the actions of the females I had observed, which were not easily flushed. The male of the pair of cedar waxwings I had observed for advanced ornithology was not seen on the nest, but I believe the bird on the nest, in this case, was the male. However no bird was seen on the nest again and the eggs were abandoned.

#4. Two waxwings were found carrying material to a nearly completed nest in a clump of oak sprouts on Aug. 4. One which carried the largest load and was most aggressive around the nest was collected and proved to be the female, carrying a fairly well developed egg.

#5. A pair of robins started a nest on the top of a broken-off aspen trunk, July 30. They were under observation Aug. 7. Once the male sat on the edge of the nest guarding the eggs while the female (easily told by her partly bare crown) was away. However he was away from the nest most of the day. The female was flushed several times but he was out of hearing.

At 5:30 A.M. Aug. 8 he came when the female was flushed and was collected.

The female returned to the nest and continued brooding. No evidence of renating was seen, the female brooding the eggs until Aug. 13 when camp ended. Two of the eggs were then found broken and the nest apparently deserted.

R. E. Yeatter

Bird Banding.

No banding was done as bands from the U. S. Biological Survey came too late to use for nestlings, and no adults were caught.

Government trap 5' x 5' x 6' was built by Malcom Smith, Dr. Ernest Hartman, and myself, becoming permanent property of the Biological Station.

R. R. Yeatter  
U. of M. Biological Station,  
Summer 1927  
Zoo. 254 D 4 hours.

Report of Progress on Problem of Remating of Birds.

This report is mainly on the observations of the pairs of nesting birds studied.

1. Kingbirds.

Nest in birch near Davis flagpole.

Found July 1, -3 young about half grown.

Female marked by paint on nest.

Male shot July 4.

Female cared for young until young left about

July 19.

On July 7, 8, 10, 11, (visits in morning or evening) another bird was seen near the nest. It was frequently seen to follow the female, but she never welcomed it. She sometimes flew at it as if angry.

On July 14 and 15 two birds were found near the nest besides the female. One of these at times flew after the female, the other sometimes followed at a distance.

Both this female and the female of 2. below lost a feather or two from tail which may have been from being seized by other their pursuing kingbirds.

Possible explanations-My opinion of the presence of the strange bird or birds at the nest while observing was that the single bird was one from a nearby pair merely visiting the nest. The bird never staid long when I came. The two birds may have been a pair. Some weight is given the possibility that she was visited by a male anxious to mate by the fact that for a time No. 2 Kingbird female was similarly visited by one and two birds and that she finally did remate.

Summary The female successfully reared the young, was visited by other kingbirds, but did not seem to remate.

2. Kingbirds.

Nest at west end of Davis baseball field. D marked-paint.

Found July 1, 3 eggs in nest. July 4, two (all) had hatched.

Male was not seen until July 4 (probably becoming more interested in nesting activities.)

Male shot July 5.

On July 8, 9, 10, 11, and 15 the female was caring for the young alone. No other one came when she scolded on these days.

On July 7 another kingbird was found in trees near nest and remained in vicinity about two minutes after I came. On July 13 another bird was seen near paying some attention to the female. This was a quiet bird who seldom scolded me or kingbird visiting. On July 14 I caused the female to scold which called two kingbirds from vicinity.

On July 18 another bird was with the female with which she seemed to have remated. They kept together

as they flew from tree to tree. His presence seemed agreeable to the female. Five or six more visits confirmed by belief that remating had taken place as all but once the two were together. Last young one left the nest July 21.

### 3. Cedar Waxwings.

Nest near House 33 Manville. *Red maple*

July 10-four eggs in nest.

July 11 male wounded with .22, dust shot, but not found.

Female brooded eggs until July 14, when only two eggs were found in nest and female deserted. Chipmunk?

### 4. Kingbirds

Nest in tree along shore north of Camp Davis.

July 10 4 eggs in nest.

July 11 the female was shot by mistake instead of the male. The nest was not seen occupied again and was deserted by the male.

### 5. Kingbirds.

July-1 Nest in birch close to House 33, Manville.

July 12, female shot. There were then two well feathered young in the nest and both parents quite noisy about the nest.

The male kept close to the nest and cared for the young until July 17, when I banded the young, and they left the nest the same day when they could barely fly. They The young left the nest considerably too young. They called loudly, as though hungry, during the rest of July 17 and I thought the male had deserted them I took one young one into the laboratory, night of July 17, intending to feed him. On the next morning I found the male feeding one young in a tree near the nest, and I returned the other. Several times during the next few days I saw one or two of them being fed by one bird, their immature condition helping me to identify them. I found the two together in different trees in the vicinity. I found the same habit of keeping together, seeming instinctive, in young waxwings after leaving the nest. When scattered by my presence they would return to the same close vicinity.

### 6. Robins.

birch  
Nest in ~~shanty~~ tree by old pump house back of Davis.

July 20, three young hatching.

Male shot July 21.

This nest was not visited regularly by me, but on two observations the female was caring for the young alone. On Aug. 3 she was caring for the young alone and Aug. 4 the last young left the nest and no other bird than female was seen.

The female reared the young alone from the day after they hatched and there was no evidence of remating.

### 7. Waxwings.

over

Nest in red maple clump in first hill toward Burr's south side of road.

July 23, male shot. At this time there were three recently hatched young in the nest.

July 30 female was caring for young alone.

July 31, at dusk the young were quite noisy and female was not seen. The night was cold and in the morning all three



young were dead in the nest and the female was not seen. The female had been caught, shot or had deserted, probably one of the first possibilities. In this case there was no other bird to take care of the young in place of the female. If remating had taken place the other bird was not functioning taking care of the young.

### 8. Waxwings

Nest in red maple clump on left side of road to Burrs beyond first hill.

Female shot July 31, 9:30 A.M. Five young about half grown were in the nest.

Aug. 1, morning after an unusually cold night were contented and sufficiently fed. Evening of same day male was seen to feed young.

At all times when the birds were observed in the nest they seemed well taken care of.

Aug. 7 young left the nest. Aug. 8 and 9 the a single bird, the same one always, was seen feeding young ones (identified as those in nest by bands) in bushes about 75 feet from the nest. They were scattered when I came up Aug. 8, one flying to a tree about 300 feet away, but came back and all kept fairly close together. The same was true Aug. 9, when the male seemed to be taking one of the stronger ones on trial flights. In feeding the young the male now regurgitated whole Amalanchier berries and fed them. Earlier the Amalanchier and blue berries had been crushed.

~~When I arrived Aug. 9 there were two or three adult waxwings-~~ The male completed the nesting period and cared for the young after they left the nest, but there was nothing to prove remating.

### 9. Waxwings

Nest in red maple clump on road to Burrs, near No. 7.

Male shot Aug. 6, four young in nest two or three days old.

Aug. 8, 9, 10, 11, 12, 13, female was seen feeding young. On Aug. 11 another waxwing was heard in the vicinity when female was feeding young, and Aug. 12 several other waxwing were seen in the neighborhood of the nest. Nothing to indicate remating as yet, observation still going on Aug. 15.

### Summary

#### 1. Nests - kingbird

1. Male ~~waxwing~~ shot July 4, female successfully reared the three young. She was visited several times by another kingbird, sometimes two, but did not seem to remate.

2. Male king bird was shot when young were newly hatched. The young ones were cared for in the nest for 20 days more. The female remated about three days before they left the nest.

3. Male waxwing was wounded but not found. Female sitting on clutch just laid, deserted after ~~see~~ two of the eggs disappeared. Perhaps frightened by chipmunks. *in period of*

4. Female kingbird was shot while sitting on eggs and nest was deserted.

5. Male kingbird cared for the young five days in the nest after female was shot, and was seen easing-fer-them-feeding them after they left the nest.

6. Male robin shot when young were hatching. Female reared the young successfully but apparently did not remate.

waxwing

7. Female cared for the young until July 31 after male was shot July 23, then disappeared and young died in the nest.

8. Male waxwing completed rearing of five halfgrown young after female was shot and fed and took them on trial flights after leaving the nest.

9. Female is taking care of four young (Aug. 6-Aug. 15) since male was shot. ~~Time~~ Other ~~wax~~-waxwings have been seen in the neighborhood of the nest. Observation is still going on.

B. Either sex of kingbirds and cedar waxwings may complete nesting activities when the other bird is taken while the young are in the nest.

C. In 1927 one female kingbird remated before the young left the nest; the other did not though she was visited by other kingbirds several times.

D. One ~~in~~ nest was known to <sup>contain</sup> ~~have~~ young kingbirds 21 days, the full period in the nest was not determined.

R.E. Yeutter  
 U. of M. Biological Station  
 Summer 1927.  
 Zoo. 259d 4 hours.

immature and

Birds Banded. (All nestlings except 172328, Red Eyed Vireo)

Cedar Waxwings.

July 26 172303 Back of  
172304 Station Garage.  
172305

July 27 480309 Back of Davis  
480309 Boathouse.

July 172306  
 Aug. 1 172307 Maple Clump by  
 172311 Landing Dock.  
 172312

Aug. 1 172313 Road to Burr's.  
 172314  
 172315

Aug. 4 172316  
 172317  
 172318 Road to Burr's  
 172319  
 172320

Aug. 10 480810  
480811 Road to Burrs.  
480812  
480813

Kingbirds

July 4 480803  
480804 Back of Davis  
480805  
 July 4 480806 By House 33  
480807 Manville.

House Wrens

July 11. B626  
B627  
B628 Box by Manville  
B629 Beach.  
B630 (Silvey)  
B631  
B632

Spotted Sandpiper

July 1, 172301 West of  
 Manville.

Indigo Bunting.

July 6 172302 Grapevine Point

Brown Thrashers

July 1. 112171 Back of Davis

July 4, 480302 Toward Bryant's

July 17. 112173 Baseline back (Rode-  
112174 of Manville. heffer)

July 27 112172 Back of Davis

Red Eyed Vireos

172308 Near camp.  
172309 (Miss Young)  
172310

Aug. 4 172324  
172326 Near Mess Hall  
172327 (Doris Porter)  
172328 (adult)

Aug. 2 Phoebes  
172321  
172322 Near Kitchen  
172323 (Doris Porter)

Robins

July 20 112175 Back of Botany  
 Lab (Silvey)  
 Aug. 2 112176 By Pump house  
 back of Davis.

Total 52.