

**BIRD BANDING NEWS**

Conducted by W. I. Lyon

**SUMMARY OF TRAPPING AND BANDING OPERATIONS IN  
NORTHERN MICHIGAN**

BY M. J. MAGEE

In the fall of 1915 I began putting out food for the birds. At first I was a little discouraged, for I seemed to be able to attract nothing but English Sparrows. However, I made war on the sparrows, and on February 17, 1916, a male and two female Evening Grosbeaks came in to feed. More and more kept coming until there were more than fifty feeding daily.

On April 6 of the same year the first Purple Finches came in. Since that time I have kept food out winter and summer; and it is very seldom that we sit down to a meal by daylight without the presence of wild birds at the feeding tray by the dining-room window or at the feeding booths on the nearby trees.

In 1917 I built a bird bath, which, in season, attracts many birds not interested in the seed foods. In 1921 I began, in a small way, to operate an ordinary sparrow trap. The next year I added a so-called bander's trap and enlarged the openings in the sparrow trap, because I found that it was almost impossible to get some of the birds, particularly the Purple Finch, to go through the small opening into the back of the trap. I also used one drop trap, which was used most of the time over a part of the bird bath.

Since that time I have tried almost every kind of a trap, and have finally settled down to the operation of six traps; these are, a Lyon sparrow trap, a sparrow trap with enlarged openings, two drop traps, an automatic trap, and a large drop trap over the bird bath. The last-named trap is 5x3 feet 6 inches on the ground, and eighteen inches high, with two doors on each side and four on top, thus making it possible to get into either side or any part of the top. The last two traps are of my own design.

This year I have enclosed my station with a cat-proof fence. The space enclosed extends from the back of my house to the back of my neighbor's house; and from the fronts of the houses to the front walk, giving me an area 75x175 feet, about one-quarter of which is covered with grass, a few shrubs and trees, while the rest of the area includes some trees and a thicket, left in a wild state.

I always cover my traps with pieces of blanket. It keeps the birds quiet, and they will go into the gathering cage as soon as the door is opened and a corner of the blanket is lifted. I also cover the gathering cage while carrying the birds around. Since doing this I have had little trouble with the birds injuring themselves by striking against the wires or poking the bill through the meshes.

I would have banded many more birds in 1922, but twice in the spring, and once in the fall, I was entirely out of bands; these were times when the Biological Survey was encountering difficulty in having the bands manufactured. Except less than a dozen birds, banded in 1921 and 1922, all my banding has been done within fifty feet of my dining-room window. Since 1922 I have not banded a fledgling, even when the birds are nesting right at the house. I find that I can get them in the traps as soon as they are able to get around, and then there is less danger of injuring the young birds.

One who is just beginning his banding work can scarcely realize how interesting it becomes as the years go by and the returns keep coming in. I remember very well the thrill I experienced when my first return came in on April 22, 1923; it was a Purple Finch (No. 30622) that I banded on July 11, 1922. This bird was back in 1924, but I have not seen it since. My second return was also a Purple Finch (No. 103609), an adult male when banded on July 28, 1922. This bird has been back every year since, and has repeated from one to eight times each year. As it was in adult male plumage when trapped in 1922 it must have been at least two years old at that time, and must now be at least six years old, it is as highly colored an old male as I have ever seen.

The first Song Sparrow to be trapped this year, 1926, was No. 61117; it was an adult bird when I banded it April 29, 1923, and has been back every year since. The first Robin was No. 269808, a young bird when banded July 13, 1924, and not trapped in 1925. On May 16 I trapped my first Chipping Sparrows for the year, three of them; one was an adult bird (No. 1558A) when banded June 5, 1924, and back in 1925. This year I also got my first return on a White-throated Sparrow, No. 164961, an adult bird when banded September 17, 1925.

On October 21, 1923, after returning from a walk with Dr. Christofferson, who has been scouting this territory with me and checking our birds both winter and summer since 1915, I set my traps and we went in to lunch. A few minutes later on looking out of the window, much to my surprise, I saw a female Scarlet Tanager in my automatic trap; a male tanager, showing some red patches, was on the ground just outside the trap. I believe this is a record late date for a Scarlet Tanager in anything like this latitude, 46° 30' North. A No. 119917 band was attached to the female, which was then held in my hand while the Doctor photographed it—this to forestall any question or argument as to the identification of the bird. This year, 1926, a full-plumaged male Scarlet Tanager came in to feed on May 20; it was feeding on the ground, in and out of my feeding boxes, or under the drop traps every day until May 29. On the 21st I banded it with No. 190588.

Some years ago White-crowned Sparrows were feeding in my window box off and on for a week or more. I noticed a bird among them that looked different; the head markings were distinctive, the outer black stripe reached from eye to eye, and the space in front of the eye was white instead of black. None of the other birds showed this solid black line. I looked through the bird books for any description or picture that would help to identify this color pattern, and finally decided that the bird was a Gambel's Sparrow (*Zonotrichia leucophrys gambeli*). But, not being sure, I did not report it. Since that time I have been on the lookout for another bird showing the same head markings. Last year, on May 21, 1925, I trapped one and banded it as a Gambel's Sparrow, No. 160668. In making the report to the Biological Survey I enclosed a sketch of the head. At the same time I sent a similar sketch to Norman A. Wood, of the University Museum of Zoology, Ann Arbor, Michigan. Under date of June 9, 1925, Mr. Wood wrote me as follows:

"Let me congratulate you on the new Michigan species. From your description and sketch I am quite sure you had a Gambel's Sparrow. I have examined ours in the Museum collection and find the grayish white lores, and the longer black line from eye to eye."

In Professor Barrows' Michigan Bird Life the Gambel's Sparrow is not mentioned, even as a possibility for Michigan. Considerable regret was expressed in several quarters that I had not collected the bird. However, I would rather look for a return of the bird alive than make a record with it dead. If I ever get another I shall photograph it as I did the female Scarlet Tanager.

Three of my birds have thus far been reported to Washington.

Purple Finch No. 118680, banded September 4, 1923, was found dead at a farm house three and a half miles from Sparta, Tennessee, on May 1, 1924. This bird had probably been farther south and was now on its way north, as I started banding Purple Finches in 1924 on April 21.

Purple Finch No. 160959, banded June 30, 1925, was reported killed on February 14, 1926, near Smackover, Arkansas. Smackover is in south-central Arkansas, not far from the Louisiana line, and about one thousand miles west of south from my banding station. I wrote to the party who made the report, and was told that Purple Finches wintered there in flocks ranging from one to two hundred in number. On May 20, 1926, I trapped Purple Finch No. 160960, which had also been banded on June 30, 1925. Of finches banded from June 27 to July 2, 1925, I have had twenty-one returns, the one just mentioned and Numbers 160901-3-5-9-16-18-21-24-25-26-29-30-32-45-48-49-54-70-98-99. It is possible that all of these birds may have been in the flock that wintered in southern Arkansas.

Evening Grosbeak No. 110630, banded on March 23, 1924, was reported by Deputy Minister L. K. Richard, of the Department of Colonization, Mines and Fisheries, Province of Quebec, as having been killed near Quebec. I wrote Mr. Richard and he replied, "Bird was killed at St. Charles, County of Bellechasse, some twenty-five miles east of Quebec on March 9, 1926." This place is some six hundred and fifty miles east of where the bird was banded. Dr. Christofferson and I have suspected for some years that there was more of an east and west movement of our Evening Grosbeaks than north and south. This report from Quebec strengthens our suspicion.

Some of my notes on the plumage of the Purple Finch were published in the *Auk* for October, 1924. Reprints were supplied to the U. S. Biological Survey for distribution to bird banders at that time.\*

In these notes I stated that the notes on plumage should be considered only as preliminary. With one slight correction and two additions that report now stands as published.

Correction. Adult male—"Most, if not all, do not acquire the crimson plumage until two years old"; this should read, "The crimson plumage is not acquired until the bird is at least a year old, and in many not until at least two years old." Many young males trapped in the spring acquire the adult plumage by fall. So many of them, that some must be young of the previous year, but certainly all are not. Purple Finch No. 58864 was banded on May 12, 1923, as a young male or female; it had molted and repeated on September 4. At this time it showed no crimson color and I marked it as probably a female. It returned on May 7, 1925, in adult male plumage. This bird could not have been younger than a 1922 bird, and did not acquire the adult male plumage until 1924,

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\*I still have on hand a small supply of these reprints, and will be glad to send one to anyone upon request.



Of birds banded in 1922 I have had 41 back; one Song Sparrow and 40 Purple Finches. Of the birds banded in 1923 I have had 115 back; four Song Sparrows, five Evening Grosbeaks, five Robins, one Chipping Sparrow, 100 Purple Finches. Of the birds banded in 1924 I have had 115 back; one Song Sparrow, four Evening Grosbeaks, one Robin, one Goldfinch, one Chipping Sparrow, two Lincoln's Sparrows, 105 Purple Finches. Of the birds banded in 1925 I have had 114 back; three Song Sparrows, one Evening Grosbeak, one Robin, one White-throated Sparrow, 108 Purple Finches.

For plumage records repeats are important. I have been able to check many of my banded Purple Finches all through the molting season into the fall plumage.

The average life of our small birds must be very short. They suffer many casualties, and the mortality must be very great, even among those not migrating south of the United States. A check-up of my Purple Finch returns seems to indicate this very plainly.

TABLE 2. To show decrease in number of returns.

	Number banded	Number of returns			
		1923	1924	1925	1926 half year
1922.....	254	33	19	5	3
1923.....	1092		72	40	17
1924.....	1043			88	38
1925.....	1510				108

The successive decreases may, at least in part, indicate the mortality. My records would also seem to indicate that the average life of the male Purple Finches is longer than that of the females. Since starting to do banding up to December 31, 1925, I have banded 3,908 Purple Finches, of which 673 were in adult male plumage. Three hundred fifty-three of these have returned, of which 82 were in adult male plumage when banded. This makes the returns from all nine per cent, and from adult males alone twelve per cent. During the same time birds banded as young males or females that on last return were in adult male plumage total 135. Add these to the 82 banded in adult male plumage and we have 217 definitely known to be males out of 353; or 61.33 per cent of all returns have been males, and only 38.66 per cent have been females, with certainly some young males included. A similar result is obtained from a study of the returns for the first half of the year 1926, as may be seen from the following table.

TABLE 3. Sex of Purple Finch returns for first six months of 1926.

Of 3 returns banded in 1922,	3 are in adult male plumage
Of 17 returns banded in 1923,	9 are in adult male plumage
Of 38 returns banded in 1924,	28 are in adult male plumage
Of 108 returns banded in 1925,	74 are in adult male plumage

166

114

From these figures we find that out of the 166 returns during this six months period, 114, or 68.66 per cent, were positively known to be males.

TABLE 4. Distribution of all Purple Finch returns as to sex.

Year Banded	In adult male plumage when banded	Banded as young male or female. In adult male plumage on last return	Banded as young male or female. No change in plumage on any return.	Total
1922.....	11	10	19	40
1923.....	32	29	39	100
1924.....	20	41	44	105
1925.....	19	55	34	108
	82	135	136	353

To anyone about to start to feed or band birds I would say, if you keep a cat and are not willing to give it up, don't start. The house cat, and that means your cats and all your neighbors' cats, is the most destructive agency to bird life that we have in the towns. With me it has been a constant war on cats and English Sparrows. In 1924 and early in 1925 I know that cats got a number of my birds. I always kept a gun handy and shot any cat on sight, but I felt that I was not getting results; so I wrote to the U. S. Biological Survey and they sent me a reprint from the Yearbook of the Department of Agriculture, for 1919, entitled "Trapping on the Farm." This reprint describes a cat trap, and how to make it. I had one made, and it works. My neighbors, voluntarily or involuntarily, have stopped keeping cats.

TABLE 5. A record of cat and sparrow control.

	1921	1922	1923	1924	1925	6 mo. 1926	Total
English Sparrows destroyed.....	132	257	588	187	411	58	1633
Cats destroyed .....	1	2	7	4	22	25	61

SAULT STE. MARIE, MICHIGAN.

### AN EXONERATION OF THE PURPLE FINCH

BY M. J. MAGEE

Is the Purple Finch (*Carpodacus purpureus*) entitled to its reputation? It is reported as "of doubtful utility", "the most confirmed bud-eater of all our birds", etc. Since 1916 I have had them feeding by the hundreds in my yard, from early spring until late in the fall.

On my lot there are a few apple trees, at least thirty-five years old; they have never been sprayed nor had any attention. In the *Auk* for October, 1924, I published some notes on the Purple Finch. Here I stated that "Last year more of the birds were here than ever before, and my trees never had more or better apples, hardly a wormy one in the lot. I doubt if their budding does any harm, certainly not to apples in any event."

In 1925 I made some photographs showing these apple trees in different stages of fruiting. Figures 1 and 2 show the same tree, which stands about

fifty feet back of the house, and about seventy-five feet from the bird bath. Figure 1 shows the tree in blossom. Figure 2 shows the tree propped up to keep the weight of the apples from breaking the limbs. Eleven and a half bushels of apples were gathered from this tree. Figure 3 shows about half of an apple tree, at my bird bath, just before the apples were picked. In a storm four

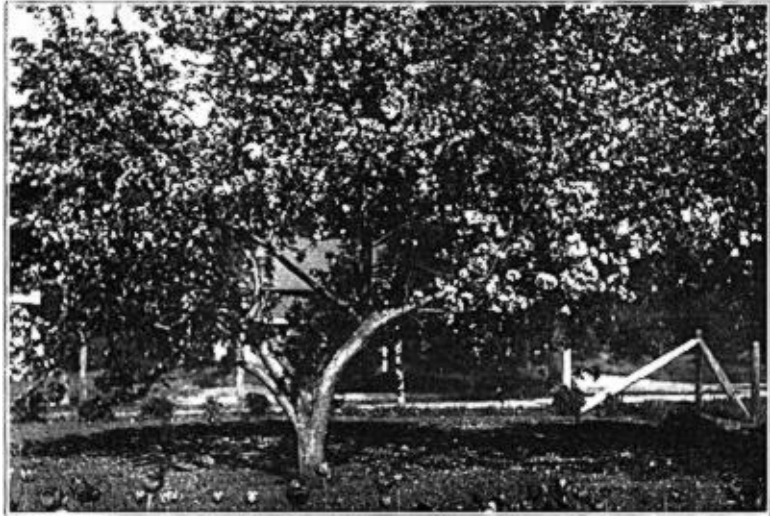


FIGURE 1. Apple tree in blossom, frequented by large numbers of Purple Finches.

years before this tree was split in two, and the back half of it is now gone; but it still bears fruit, and in 1925 yielded four and a half bushels.

All these apples were looked over carefully, and only about three wormy ones were found.

So, from these facts, I am convinced that the Purple Finches do no appreciable harm to the apple crop, even though they may be guilty of eating some of the buds in the springtime. On the other hand the fruit was abundant and unusually free from worms, while the birds, especially Purple Finches, were unusually abundant in the trees in the blossoming season. What connection there may be between these last facts we may only surmise, but it does not seem probable that we could reach a conclusion to the disadvantage of the birds. In 1925 I banded forty-nine warblers, of twelve species, and all but three or four were taken in the trap over my bird bath, shown in Figure 3.

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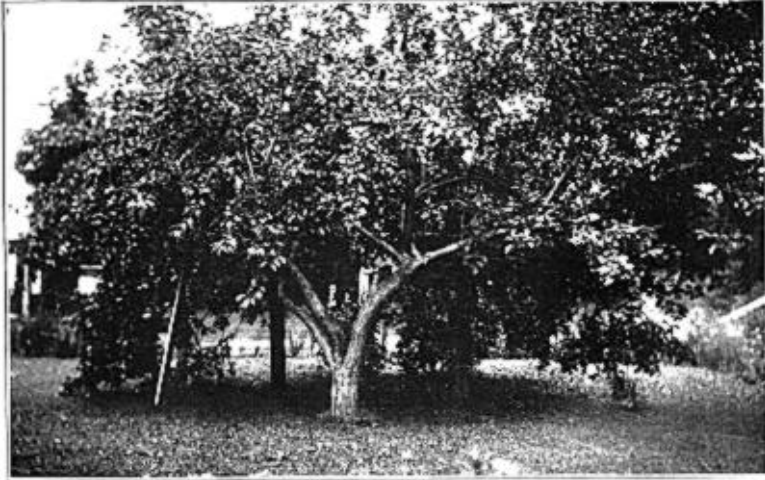


FIGURE 2. Same tree heavily loaded with fruit, and propped to prevent breaking of limbs.



FIGURE 3. Bird bath trap located under an apple tree which bore  $4\frac{1}{2}$  bushels of fruit.



## NOTES ON THE EVENING GROSBEEK

BY M. J. MACEE

Since beginning my feeding of wild birds in 1915 I have had a flock of Evening Grosbeaks (*Hesperiphona vespertina*) here every winter except one, and several times a few have been here during the summer, the latter on three or four occasions being accompanied by young birds still fed by the parents. In 1923 I banded 59 of these birds; in 1924, 138; in 1925, 205; and 82 during the first half of 1926. During midwinter I do very little banding, because the snow is deep, and the grosbeaks have to be handled very carefully or they may injure each other. Every month in the year, for seven years, Dr. Christofferson, my associate in bird work, and myself have checked the Evening Grosbeak in the eastern part of the upper peninsula of Michigan. So in the future it will have to be put down as a regular resident of this locality, and not as an irregular winter visitor merely.

We have not yet been fortunate enough to locate any nests, so cannot say whether the males can be distinguished from the females before the young leave the nest. They can certainly be separated soon after. At the feeding station on August 18, 1924, a very young grosbeak was being fed pin cherries by the female parent. The young was fawn color, with wings and tail as in the adult female, except that the largest white patch on the wing was quite yellow.

On September 8, 1924, the feeding station was visited by one female grosbeak with one young, and by another with three. In general the color of the young was fawn, but somewhat darker than in the young of August 18. One of the young had the wing and tail markings of the female; the others had the large white wing patch of the males with a decidedly yellow tinge to the feathers of the breast and middle back, and tails like females. Bills of all were dusky, and considerably darker than the bills of females. The two old females were feeding the young with sunflower seeds, with an occasional pin cherry. Up to September 12 nine young visited the feeding station; one female with three young, two with two young each, and two with one each. On September 11 I trapped a young female. This bird was more mature than the young first seen on September 8, and was able to feed itself, though fed now and then by the old female. Its plumage was much like an adult female, but there was more fawn color about the head, the bill was darker, and the largest white patch on each wing was tinged with yellow. The feathers were quite downy, especially on the head. The throat was the same color as the sides of the head and upper breast, and bordered on each side by a distinct blackish line.

On October 18, 1921, I saw a young male with black and white on the wings, and yellow above the bill and eyes, as in the adult male; the body and tail were like the adult female. Of the many males I have had at the feeding station since 1915 this is the only young male I have thus far seen in changing plumage. And, judging from this one specimen we might conclude that the young males change very quickly into the adult plumage. The tail is the last to change, but by midwinter one seldom finds a male showing any conspicuous white on the tail; however, the presence of a little gray-white on some of the tail feathers does not necessarily indicate a young male. Grosbeak No. 110646 was banded on April 7, 1924, and when trapped on April 5, 1926, it had a gray-white patch on the inner web at the tip of each outer tail feather.

Although the birds rapidly change into the adult plumage, I believe, in most cases, the young birds can be distinguished from the old ones in late fall and early winter, and a few even in the following spring. The young males are more of a lemon yellow, and are much less bronzed than the older males. I am sure that the very heavily bronzed birds are old males, and the lightly bronzed birds are young males. Between the two extremes will be found an infinite variety of shadings.

The young females do not have the whitish throat; it is the same color as the sides of the head and upper breast. This gradually becomes lighter until the gray-white throat of the adult female is attained. In almost all cases the dark lines at the sides of the throat are present. Out of the thirty-eight females banded from November 11 to December 31, 1925, sixteen had the throat of the same color as the sides of the head and upper breast, although in some cases by ruffling up the feathers it could be seen that they were becoming lighter. All showed the dark lines at the sides of the throat except No. 331327, which was banded on November 22. On the latter's card at that time I noted that the "dark side markings are very indistinct."

The amount of white on the wings varies much in the females, hardly any two having exactly the same markings. I believe that those showing the least white are the young females. These young also show less of a yellow tinge on the feathers of the nape, back, and breast. I have never seen a female heavily tinged with yellow that did not have more than the average amount of white on the wings.

There is one correction that should be made in the usual description of the plumage of the Evening Grosbeak. After molting, the feathers in the white wing patches of both males and females are distinctly edged with yellow. All of the descriptions of the plumage that I have seen, from Audubon down, are very much as given by Professor Barrows in "Michigan Bird Life", in which for the male it is said, "most of the secondaries and their coverts snowy white"; and of the female, "primaries and secondaries black, boldly spotted with white." This limited description may be due to the fact that only specimens taken in the spring were examined. Practically all of my banding of these grosbeaks has been done in the spring, until last fall (1925); and then from November 11 to March 1 I banded eighty-four, forty males and forty-four females. The males had nearly all of the feathers in the white wing patch edged with yellow on the outer webs, except at the tips. This was true for the great majority of females as well; a few showed little, if any, yellow edging to the white markings on the primaries.

Either from wear or fading the yellow edging lightens; in the males, first on the white secondaries; in the females, on the white patches of the primaries. This fading of the yellow edging has been particularly noticeable since the first of March. I have banded several males showing no distinguishable yellow on the white secondaries, and a number of females showing none on the primary white patches. Sometimes the edging is very indistinct and can only be detected by getting the bird in a perfect light. On damp days the yellow edging is more noticeable than on dry days. Two males (No. 393387 and No. 393411) and four females (Nos. 393405, 393407, 393412, and 393413), all banded between April

4 and 10, showed no distinguishable yellow edging on any of the white wing feathers.

In addition to the variations in plumage already mentioned there are some in the plumage of the male which I believe are entirely accidental. The upper tail coverts are usually solid black, but quite a few have the two longest feathers tipped or dotted with yellow, and now and then the four longest feathers are so marked. In a few cases the markings are white, which I think can be accounted for through fading or wear. The yellow under tail coverts are black on the bases, and sometimes black patches show on the yellow portion of some of the feathers—in one case the under tail coverts were nearly half jet black.

During the winter of 1925-26 a number of my banded grosbeaks were seen at Hulbert, some forty-five miles west of the Soo; and under date of April 9, 1926, I received the following notice from the Bureau of Biological Survey: "Evening Grosbeak No. 110630, banded by you March 23, 1924, was killed at Quebec, Canada. Reported March 13, 1926."

SAULT STE. MARIE, MICHIGAN.

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### SPECIAL STUDIES OF MOURNING DOVES BY THE BIRD BANDING METHOD

BY WILLIAM BREWSTER TABER, JR.

The bird banding method has opened an enormous field of investigation which could not be carried on in any other way. It is a key that will unlock many an otherwise unsolvable problem. Indeed the trapping and handling of living birds brings to light phenomena to be explained which we did not even know existed. Although many of these investigations will not assist in clarifying our main problem, the mystery of migration, they will uncover new facts which will add materially to our present knowledge of bird life.

The last directory of bird banders, published by the U. S. Bureau of Biological Survey, lists under each person's name the special studies in which he is interested. It enables us to communicate with others doing similar research and in that way obtain helpful ideas. If we put aside our personal ambitions to obtain the honor of being the first to publish some new fact, and if we direct all of our efforts to discovering the truth, helping others engaged in the same search as much as we can and giving freely the information that we possess, our progress will be more rapid and the extent of our studies will be greatly increased.

It has been my good fortune to accidentally possess, on my farm, the means of attracting considerable numbers of Mourning Doves. Strange as it may seem this magnet is nothing else but a natural gas well. The well is old and the casing has rotted allowing the salt water, which is so frequently associated with the gas sand, to penetrate to the pocket at the bottom. When sufficient water accumulates it has been necessary to open a valve at the top of the well and allow gas and salt water to blow out, drenching the surrounding ground. This has been done periodically for the past few years, resulting in the saturation of the earth with salt and killing the vegetation. Like their relatives, the domestic pigeon, Mourning Doves are very fond of salt, so this salt peck has proved a strong attraction. Migrants and summer residents alike fly to it. It is not an

unusual sight to see several doves at once about the well busily pecking at the ground and perhaps a dozen or more perched on the top wire of the nearby fence. To begin with I used only a house trap located near the well and baited with whole grains of wheat and corn, but later added a slightly modified clover leaf trap situated within a few feet of the first. Of these two the clover leaf trap catches more doves, deriving its advantage from its three openings instead of only one, and its all wire construction.

In my location, central Illinois, the Mourning Dove trapping season opens the last few days of March, and soon after the first catches I find one or two of the earliest nests in the orchard. Many of the doves must arrive already mated. When two birds are caught together they are usually of opposite sex and when released usually fly away in company. During the month of April, 1924, forty doves were caught. Five catches were of two birds each, and in all of these cases they were paired off male and female. During April, 1925, thirty doves were caught. Three catches were of two each and in each case they also were male and female.

About the first of May successful nest locations have been secured and the doves are busy incubating their eggs. Instead of catching birds of either sex at any time of day it becomes evident the two sexes are now not feeding together, but that in the early morning most doves caught are males, in the middle of the day mostly females, and in the late afternoon males again. From May 1 to June 4, 1924, inclusive, a study of this phenomenon was made. Including repeats and returns 114 doves were caught, fifty-three females all but five of which were found in the traps between 8 A. M. and 2 P. M., and sixty-one were males all but nineteen of which were found caught either before or after those hours. Therefore the daily incubating period of the males must be from about 8 A. M. to about 2 P. M., while the females are on the nests for the remainder of the time. The exceptions may be explained by a number of reasons. Several may be late migrants. Several may be due to nests having been broken up by some marauders and the doves having not yet secured a new location. Also there must be a number of free unattached birds wandering about the countryside, for often when one brooding bird is killed the other secures a new mate astonishingly quickly. Dr. A. A. Allen in the January, 1924, *Auk* illustrates the presence of free unattached birds but considers them to be late young migrants. However, Mourning Dove 314133 (a female) is a wanderer, for it was banded by me on June 6, 1924, and was picked up with a broken wing at Pleasant Plains, Illinois, on June 22, which is approximately 110 miles west and only twenty-five miles north of Greenwood Farm. Clearly this dove was wandering, for this occurred at the height of the nesting season and neither the direction nor the distance would indicate migration.

There seems to be a general belief that, like their congener, the domestic pigeon, Mourning Doves mate for life, but the evidence that I have is most certainly negative, for I have not a single instance of one being caught with its former companion of opposite sex among seventeen such doves which have returned during succeeding years. Of course this evidence is not sufficient to be considered conclusive. However, it may be taken for whatever it is worth.

In the course of my banding operations, I have found that Mourning Doves have suffered from two major diseases. During the latter part of August and

the month of September, 1924, an epidemic of avian diphtheria attacked them. Out of eighty different doves handled during this period, six were affected. Only one bird of another species, a Blue Jay, had contracted it. This epidemic is of considerable interest because it occurred at the height of the dove migration and because during that fall this disease was particularly bad among the poultry of the middle west. However there is no evidence that doves gave the disease to the chickens. Indeed it may have been quite the reverse. The symptoms were yellowish white lesions in the back of the mouth or throat, swellings on the sides of the head, formation of a brownish scab on the edges of the bill, a grayish discharge from the corners of the mouth and nostrils, a general inflammation of the mucous membrane of the mouth and nostrils sometimes resulting in the complete closing of the latter and in severe cases even the sloughing off of portions of the bill. The bill of one immature dove was so badly distorted and deformed that the outer end of the upper bill was crossed to the left and the point turned down over the left side of the lower bill extending a considerable distance below it. Even if this bird recovered it must have been very difficult for it to pick up its food.

The other major disease is the bird foot disease which Mr. Stoddard, who is conducting the quail investigation in Georgia for the Bureau of Biological Survey, has advised me is the same as that which has been discovered by Mr. Baldwin and Mr. Musselman to be so prevalent among the Chipping Sparrows at Thomasville. A large number of doves have been affected by it at some time during their lives. However as far as their feet are concerned it does not seem to cause any serious inconvenience although in some cases nearly the outer half of several of the toes have sloughed off. Missing toe nails and outer portions of the toes indicate that the bird has at some time suffered from it. The symptoms of active cases are shortening of the toe nails, or even loss of nails and ends of toes accompanied by a cyanosis or darkening of the ends of the toes affected, or even dry gangrene at the ends of the toes. A typical severe case was submitted to the Laboratory of Animal Pathology and Hygiene at the University of Illinois for examination, and they reported that the disease was probably ergot poisoning or something very similar to it. Ergotism is caused by eating seed which has been attacked by the fungus *Claviceps purpurea* which is parasitic upon many members of the grass family. As Mourning Doves include various grass seeds in their diet, it is quite possible that it may be ergotism. However that is yet to be proved. Since ergot is an abortifacient as well as a powerful haemostatic it seems likely that if it actually is the cause of the disease its more serious effect would be to interfere with the egg laying function.

In closing, allow me to enter my plea, along with that of Dr. Gross, that more of us make use of the bird banding method for pursuing special studies besides that of migration. There are so many matters to investigate, so many of nature's secrets to disclose, that the efforts of all of us are needed. One investigation leads to another and so the interest never lags. And if we communicate with one another in a spirit of co-operative helpfulness our progress is sure to be rapid.

KANSAS, ILLINOIS.

**Banding Barred Owls.**—On May 9, 1925, Mr. L. Claire Hurlbert and myself set out for a wooded area about a half mile from the city of East Lansing prepared to take movies and still pictures of a Barred Owl (*Strix varia varia*) brood which had been under observation for some time. The nest was in a deep shagbark hickory stub about thirty feet high, whose top had been removed by the wind. The cavity made a securely hidden retreat for the three inmates who were about to leave the nest.

Aided by telephone climbers, I was able, finally, to stand upright on a limb, cling to the main trunk with one arm and reach into the nest with the other. By this time the parents were aware that we were intruding and came nearer the nest. Apparently the female was either the braver or the more concerned for she came nearer than her mate who seemed content to watch proceedings from a distance. The female perched on a limb less than a hundred feet from me and occasionally gave vent to a series of low calls.

As the third young bird was being transferred from the nest to the basket in which I intended to lower them to the ground for a sitting, Mr. Hurlbert began to hurriedly adjust the motion picture camera. When the female swooped down within a few inches of my shoulder, I realized what it was about. Whenever I would turn and look at her she would fly farther away and light on a limb as if she did not wish to be too near when under observation. In order to get a picture I deliberately turned my back, took a firm grip on the trunk and began to tease the young until they would utter a shrill squeal. After a few minutes the female swooped down and struck me on the shoulders with both of her feet. Although expected, the first impact was rather a surprise to me, and a new experience. The talons pierced my heavy shirt and underwear and left their marks in my skin. In about three minutes the female struck again and by this time the male seemed to think it must be a safe proposition for he, too, struck me, but with more caution and less damage. After the female had left her marks for the third time, Mr. Hurlbert thought that he must have some good films and I was more than ready to call it enough.

The young were then lowered to the ground, banded with the numbers 301851, 301852, 301853 and photographed. During this interval of about fifteen minutes the parents made no attempt to attack me as I kept them in mind and occasionally looked in their direction.

When returned to the nest, the young refused to stay inside and we finally left them perched on the edges of their former home. During the first week in June, I visited the same woods and observed five Barred Owls which I thought to be two adults and three young. Although I was unable to determine with a field glass whether any wore bands, I liked to think of them as my former acquaintances.—H. D. RUHL, *East Lansing, Michigan.*

**Banding Great Horned Owls.**—On April 18, 1926, in company with a friend I took a fifteen mile hike. We followed the railroad track south from Vicksburg, Michigan, until we crossed Big Portage Creek near Portage Lake. There we turned to our right and entered what had been a large tract of timber but now mostly second growth with a few large trees scattered here and there.

My friend, having left his boots at home, remained on the up-land, while I took a stroll through the swamp to see what I could find.

Nearing the creek at the west side of the swamp I flushed a Great Horned

Owl, and while watching him fly away spied a yellowish object sitting in a distant tree which turned out to be a young owl well feathered out but enough of the down left to give it a yellowish appearance. In another tree to the left was another owl somewhat nearer the ground.

Having brought my bird bands along it was my desire to band them, but how to do so was a problem as they were too far away from the main body of the tree and the limbs so small that climbing the tree would be of no use. So I stood there for half an hour watching and wondering. At last an idea struck me. There were lots of tall black alders standing near. I cut two of them and tied them together making a pole about fifteen feet long. I left a crotch at the top end, then I made a loop out of some heavy cord and fastened it into the split ends of the crotch and tied the other end of the cord to the pole. By raising the pole as high as I could reach, I managed to drop the loop over the owl's head. The rest was easy, that is, as far as getting the owl down was concerned.

Now for the banding; first I had the owl and then the owl had me, but after awhile I got hold of both feet with my left hand and placed him on his back, in this position he seemed quite content so long as my right hand did not come in contact with his claws, if it did it was another case of the owl having me.

At last I got a band on and let him go. When I would come toward him he partly spread his wings and would snap his bill at me. After watching him awhile and giving up all hopes of ever banding the other owl, I started back for my partner. I told him of my find and coaxed him to go along back if he thought he could hit the high spots and not lose his footing. It did not take much coaxing so we started, my partner arriving there without a mishap. After watching the actions of the banded owl which we had placed upon a large log, I still had a desire to band the other owl. So sizing up the tallest alder and the distance from the ground to the owl, I decided to make a try.

Cutting two of the tallest alders to be had and tying them together as before, I proceeded. On account of the length of the pole it made a rather limber outfit but after several attempts I finally succeeded in slipping the loop over his head, down he sailed as nice as could be. Having help this time it did not take long to band him, my partner holding him by the feet while I put the band on him. This finished we placed him on the log with the other owl and after watching them awhile, we started to go when off to the left about ten rods, I caught sight of another one perched upon an old stub about seven feet from the ground. I went over and caught this one with my hands and we soon had a band on him. He was a rather quiet bird, not much on the fight, easily handled. The other two were ready for a scrap all the time, they kept their wings extended like an old setting hen when she is protecting her chicks from an enemy, and when our hands came anywhere near they would snap at them and bite them.

The first two banded were much larger and lighter in color than the last one we banded. The largest one had a wing spread of forty-eight inches.

I had fourteen claw marks on my right hand when I got through and all bleeding. Our greatest regret was that we did not bring a camera, as they made a most beautiful sight perched upon that log.

We continued our journey home along the east bank of Little Portage Creek arriving home at 6:00 P. M., having observed fifty-one species of birds on the trip. So taking everything into consideration we had a very enjoyable day.—  
F. W. RAPP, *Vicksburg, Michigan.*