

## BIRD BANDING AT THOMASVILLE, GA., 1923

BY T. E. MUSSELMAN

*Plates XXV-XXVII*

ON February 19, 1923, I reached Thomasville, Ga., where I had been invited by Mr. S. P. Baldwin to take charge of the bird banding work which has been carried on under his direction for some years past on his beautiful "Inwood" plantation.

I spent six weeks at the work during which time I banded 610 new birds and handled 73 that had been banded in previous years. These 683 birds "repeated" 3348 times making a total of 4031 individuals taken from the traps.

One of the most striking things that interested me during my work was the large numbers of Chipping Sparrows which seemed to have diseased feet. Many of the birds, particularly the returned birds of former years lacked a nail or even part of the toes; while many of the new birds had black scabs or bleeding feet. This indicated that some very serious trouble was common among the members of this species. I determined at once that I should make an effort to find out more about this, and consequently secured a note book and manufactured a stencil of a bird's foot. Upon capturing an infected Sparrow, I numbered one of my stenciled pictures, and indicated with red and black ink the development of the disease. Results of this experiment were so voluminous that they cannot be dealt with in this article, more than to summarize that 42% of all the Chipping Sparrows captured during my stay in Thomasville were suffering or had suffered from an active infection. Of these 19% showed signs of trouble in previous years that was entirely healed while 23% were in the midst of the disease. Pictures of all stages of the disease were taken, and in the case of Chipping Sparrow No. 37304, I have a pictorial history of its development from the date of its inception until the bird lost every nail or toe on its right foot.

With regard to food I hoped to increase the number of species of birds which I caught by supplementing other seeds and grains than those already in use.

I think one of my best ventures in this line was a purchase of a peck of sunflower seeds which I mixed with the regular chicken-feed, and noticed an immediate increase in the number of Cardinals captured. The millet and sorghum seeds which were added to the bill of fare, did not noticeably increase the number of species, yet I believe that a shelf with chopped suet and cracked hickory seeds maintained for a month before the experiment would attract Chickadees, Titmice, and greater numbers of Nuthatches and Woodpeckers.

Commencing the second day of my stay I fed less food on the outside of the traps and increased the amount on the inside. What bread I placed on the outside was finely crushed, with the result that the Blue Jays and the Thrashers were forced to enter the cage in order to secure the big chunks which they enjoy so much. I believe that the use of fine bread on the outside of the trap will, in future years, increase the number of Warblers caught. However, this year the migration of Myrtle Warblers had already passed, as the spring was extremely early, and seldom did I see any of these birds, which in former years had been captured in good numbers.

One of the greatest surprises that I enjoyed was the catching of practically all the members of a covey of Quail. Unfortunately I did not have large bands during the first several days but luckily the larger bands arrived in a few days and I was able to recapture every Quail a number of times and band them.

As I arose at day-break, I noticed that many Mourning Doves came to the traps to feed, but, it was several days before I was able to catch any of them. Mr. Baldwin sent me a newly designed Woodpecker trap in which I saw possibilities. It had a door at the top and bottom which swung shut when properly placed on the side of a large tree. I noticed that many of the Doves, as they came to feed in the morning, would wander about the outside of the netting which was placed to keep cats and stray dogs from a closer approach to the trap proper. They would circle the netting several times before flying over the top and dropping to the food plot. Accordingly I set up the Woodpecker trap so that in circling the netting on the outside, it would be necessary for the Doves to go around this small hazard or through it. Should the bird touch the trigger, I felt sure that the ends would fall and secure the Dove

for me. I tried the experiment and was successful in catching my first Mourning Dove. However, in later days, I caught other Doves in both the box traps and also in the Sparrow traps, but a Dove is so large that in case of the Sparrow traps, it was unable to force itself into the second room. The trap had to be raised and the bird captured in this way before banding was possible.

Towards the end of my stay, I found that Mr. Baldwin had written to Mr. Wade, the owner of the neighboring plantation, concerning bird banding there, and that his men had baited a field for Doves with the expectation of my going there to trap. I made an early morning visit to the field and imagine my surprise on flushing more than 350 Doves upon my first approach. I immediately designed a large trap and had it placed in the field where this baiting had been done, but it took several days for the birds to become accustomed to the new trap in the midst of the feeding ground, and as I commenced the experiment late I did not have time to catch and band the Doves as I had hoped. However, all preparations are made, and my successor in 1924 will have an opportunity of handling Doves in quantities.

Upon the arrival of the Woodpecker trap I commenced baiting a large pine tree with suet and some cracked English walnuts. I found that for the catching of Red-bellied Woodpeckers, and Nuthatches, this new trap could be successfully employed. It likewise automatically caught several Warblers and I believe it to be a trap of great possibilities.

Many persons fear to commence bird banding because of the danger of hurting the birds. However, any experienced bird enthusiast can do the work successfully by exercising care and following the instructions which have been so minutely worked out. At Thomasville, during the past season, bird fatalities due to direct banding activities were practically nil.

One afternoon a stray cat entered one of the box traps and killed several of the Chipping Sparrows. A Sharp-shinned Hawk attacked the cages many times and killed several birds. In fact, one day I noticed many birds feeding under my net called "BB." A Sharp-shinned Hawk flew against this net causing it to drop and thus captured a number of birds for me. The Hawk was not frightened but viciously tore at the netting until it was able to

sever some of the strings and take away its victim to the neighboring forest. I was able to take care of this bird's existence in the course of a day or two and was never again troubled with Hawks. This trap (Plate XXV, fig. 1) is provided with blocks under the corners of the frame which keep the latter one inch above the ground when it has fallen and thus save escaping birds from injury. A strip of black cloth conceals this opening from the captive birds.

Every six or seven days, apparently, a new pair of Shrikes would locate the trapping experiment. When the Sparrows discovered a Shrike in the neighborhood they would no longer approach the trap, with the result that on several days I had fewer birds than I should normally have had. These Shrikes would sit on a neighboring tree until a number of birds were in the trap, then they would fly down and alight upon the wire of the trap. At the approach of this danger the captive birds would try to escape, and as they put their heads into the squares of the netting, a Shrike would seize the head and tear it off. During the course of my stay in Thomasville, I think I killed no fewer than eight or ten of these vicious birds. They constitute one of the greatest dangers to bird life in the South.

Of all the birds caught this year, 73% returned to the traps a second time. This would probably have been 5% higher if I could exclude all the new birds caught during my last few days stay in Thomasville. These birds did not have time to familiarize themselves with the traps and consequently I did not have a chance to capture them consistently. They did not have time to get the "trap habit."

I had fourteen birds that repeated twenty-seven or more times. Chipping Sparrow, 22849, which was caught in 1922 fifty-four times was caught fifty-one times during 1923.

Cardinal, 55220, was caught twenty-five times in trap D while her mate, 57735, was caught twenty times. Both of these were birds which had been caught in former years, yet careful handling had developed confidence in them, so they did not fear entering the trap whenever hungry.

Probably the most notable lack of fear was illustrated in the Chipping Sparrow, 55020. This bird was caught in net "BB" in front of my house together with twenty-five or thirty other

Chippies. After driving these birds into the collecting cage I re-set the net and repaired to the porch twenty feet away to band the birds I had captured. As soon as I had placed the new band on this bird, I held it in my palm where it lay for several minutes. I then tossed it into the air and it flew directly to the ground twenty feet away and continued feeding under the trap from which I had taken it less than five minutes before. A mere pull of the string would have made it my captive again.

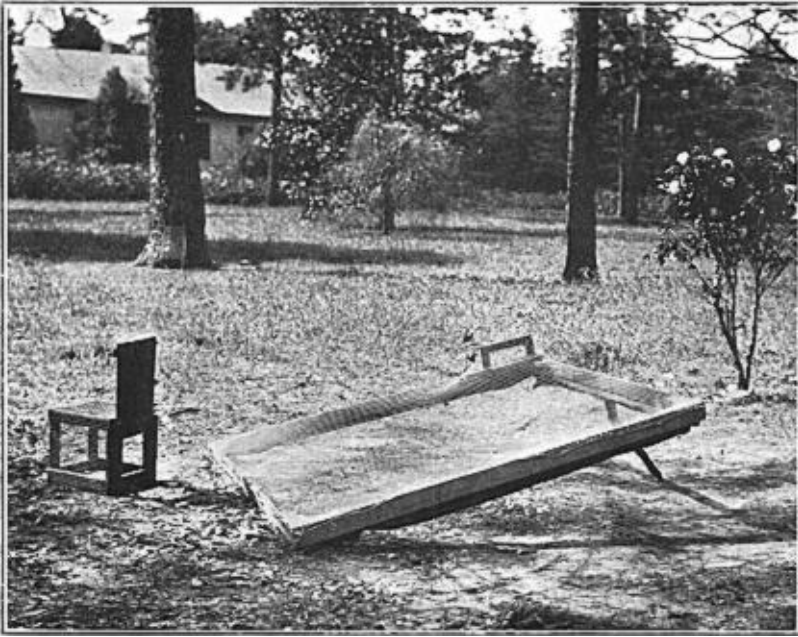
The fact is, that after a bird once gets the "trap habit" it becomes not only a daily visitor, but we often record it several times each day.

The value of these repeated records lies in the fact that one can study the progress of sickness as so clearly illustrated in the foot infection of the Chipping Sparrows, or, after a bird has had its foot amputated, or, should the tail feathers be pulled out, it gives a fine opportunity for the observer to find out the length of time required for the stump to heal or the feathers to be replaced.

In one case of the foot trouble that I noticed, the infection had developed to the size and shape of a small red cherry. Not alone was the weight tremendous for a foot so small as that of the Chipping Sparrow but the bird had difficulty in getting around because of the clumsy excrescence. I put a needle in an iodine solution and punctured the diseased part with the result that nine drops of blood dropped out on the paper upon which I operated. The swelling went down at once and a black scab formed where the ball of blood had been.

Several days later I soaked this scab in hot water and removed it and found the foot underneath to be fairly well healed. Likewise on the famous Chipping Sparrow, 37304, the infection which eventually practically destroyed the foot extended well on to the tarsus. I removed this scab also and was able to heal the infection before serious damage was done to the foot.

The activities of different birds upon being banded vary. All but the Red-bellied Woodpecker (Plate XXVI, fig. 2) will lie quietly in the hand after banding. The Cardinals pecked viciously at my fingers when caught for the first time, sometimes hanging on by the bill but usually became more or less indifferent to the handling later (Plate XXVI, fig. 1).



1. Net 'BB' Released by a Black Thread. It Caught 51 Birds at one Fall.
2. S. Prentiss Baldwin (right) Examining Chipping Sparrows with Diseased Feet.



1. Cardinal—both Male and Female will Hold on in this Manner.
2. Red-bellied Woodpecker; Showing Proper Method of Holding, the Little Finger as a Perch.

Particularly interesting are the activities of the Red-bellied Woodpeckers and Nuthatches when captured in one of the Government Sparrow traps.

The Woodpeckers became very excited, and they struggled around the entire front room of the trap in their effort to escape. Sometimes they worked along the sides, sometimes they hopped on the bottom. Very often they selected a corner and commenced picking away at the wires in an effort to release themselves. Their size was such that they could not easily pass into the second room. It made it necessary for me to lift the trap and reach in under to secure my captive. No bird that I caught fought more continually than did this one. However, his efforts were of little avail, as his bill did not hurt when he seized my finger or commenced picking at my hand. He struggled during the banding process and did not remain quietly on his back after the process was over as did most birds. He would hang by his feet without flying, provided he had something to pick at.

The moment he found nothing to fight however, he flew away with the characteristic Woodpecker flight, complaining against his capture with his hacking call. On one of the days when the traps were being attacked by a Shrike, a White-breasted Nuthatch chanced to get caught in trap "C." The Shrike immediately settled on the cage. Had the captive been a Chipping Sparrow, its death would have been but a matter of a moment or two; for the Sparrows are prone to force their heads through the wire, and thus become easy prey for the enemy, but the Nuthatch hung with its head downward, far away from the dangerous beak of the attacking bird.

Fortunately I discovered the presence of the trouble maker and killed it before any harm was done. White-throated Sparrows sometimes showed fight while in the cage, and when seized, often turned and tried to bite my fingers. They are weak, however, and I experienced no discomfort from their efforts.

Chipping Sparrows, generally, lie very quietly in the hand. Probably not more than 1% squealed when being handled. I have found that those birds which were recorded by previous observers as "squealers," likewise, showed this trait when captured by me in 1923.



The Towhee was probably the most surprising of all of the birds, as it lay in my hand, it would suddenly kick simultaneously with both feet. The effect was so different from that of most other birds that an amateur would almost certainly have lost his bird. One of the Towhees which I caught most often this year was 41511. He was a brilliant bird and with his mate, 57748, could be found in trap "A" almost any time that I approached it. I caught the female bird 50 times in 40 days—five times one day, four times another day, and three times on six other days. Whenever I released her after having recorded her capture, she would fly several feet then call "To-whee, To-whee," and immediately her mate would answer from the neighboring Azalea bushes, to which she immediately flew. The male bird had one of the strangest characteristics that I have ever noticed among captured birds. Immediately upon being seized, he commenced singing and kept up his song until I released him. I captured this bird 30 times during the period of the experiment.

I had trapped for nearly a week before I caught my first White-throated Sparrows. I heard them about traps A and AA but not until I practically ceased placing bait outside of traps did I begin to make captures. Nowhere but near the mansion house did I see or hear White-throats. I believe that Mr. Baldwin's conclusions that the White-throats at Thomasville are very local in distribution and in their activities are fully warranted.

In fact nearly all of the birds captured at this banding station showed a tendency to feed chiefly in one locality. For example Chipping Sparrow, 37050, was captured 39 times. Of these captures 32 were made at D, six at C, which was not more than 150 paces away, and one at Box 1 which was located about halfway between these other two situations, but farther to the south. This is the most notable case of local feeding that I recall.

I was almost always certain of finding one or both of the Cardinals, 55220 and 57735, upon approaching trap D, provided I had used a bountiful supply of sunflower seed. Likewise the two Towhees which I caught most often, 57748 and 41511, were continually caught in trap A, although I sometimes found they had strayed around the main house to trap "AA." Twice in the course of the trapping experiences, I captured the male bird,

41511 over at trap D, which was 3 blocks away. Yet, never did I catch him at any of the intermediate traps. What caused him to leave his native brush on these occasions I cannot say unless it was the presence of another male which sometimes seemed to have the better of him and he might have gone on a wooing expedition.

Wishing to determine how local was the distribution of the birds that I was catching, I took trap "AA" from the front of the plantation house and carried it across the fields fully half a mile beyond trap "D," which had been my last trap. My daily catches at this trap were enormous yet scarcely any of the birds were new birds. Nearly all of them were Chipping Sparrows ranging in number from 37026 to 37150, all of which had been banded during the first week of my experiment and which evidently had moved, either because of the desire for different food, or because of the flocking instinct preparatory to the northward migration. I kept this trap in operation just a week. Few of the birds, caught in it ever returned to the principal string of traps, and evidently moved onward to their nesting sites farther north.

I was not content, however, with the distance at which my trap had been placed, so I took one of the very effective net traps over to the Wade plantation about two miles directly away from Inwood plantation and beyond the trap "F." I made but one capture of some 15 or 20 birds and there was not a banded bird in the group so that I feel that the Sparrows which lived upon the food at Inwood probably went into the nearest woods for a change of diet before starting on their northward travels, but did not move generally into other forests about Thomasville.

Had I earlier appreciated the opportunity of capturing Chipping Sparrows at the Wade plantation, I should have secured numbers of them and banded them. I should have brought numbers of these banded birds from that plantation to ours to see whether they would return to the site at which they had originally been captured, or whether they would join the ranks of the local birds. These are problems that can be worked out and undoubtedly will be worked out at Thomasville, within the next few years.

Had it not been for dogs, cats and Shrikes, the experiment this year would have been almost without a fatality. Yet these

are things over which man has no control and the total birds wounded and killed was probably not greater than it would have been were banding not carried on.

In all I captured only five birds which had suffered the loss of a foot. I can not find records showing that any of these had been operated on by former agents at the Inwood plantation. I believe the steel trap is accountable for many such accidents. These birds learn to approach the food situations without fear. In the course of their northern travels, some of them are almost sure to meet with a rat trap, set for some of these vermin and as the steel jaws close they amputate the leg swiftly and surely.

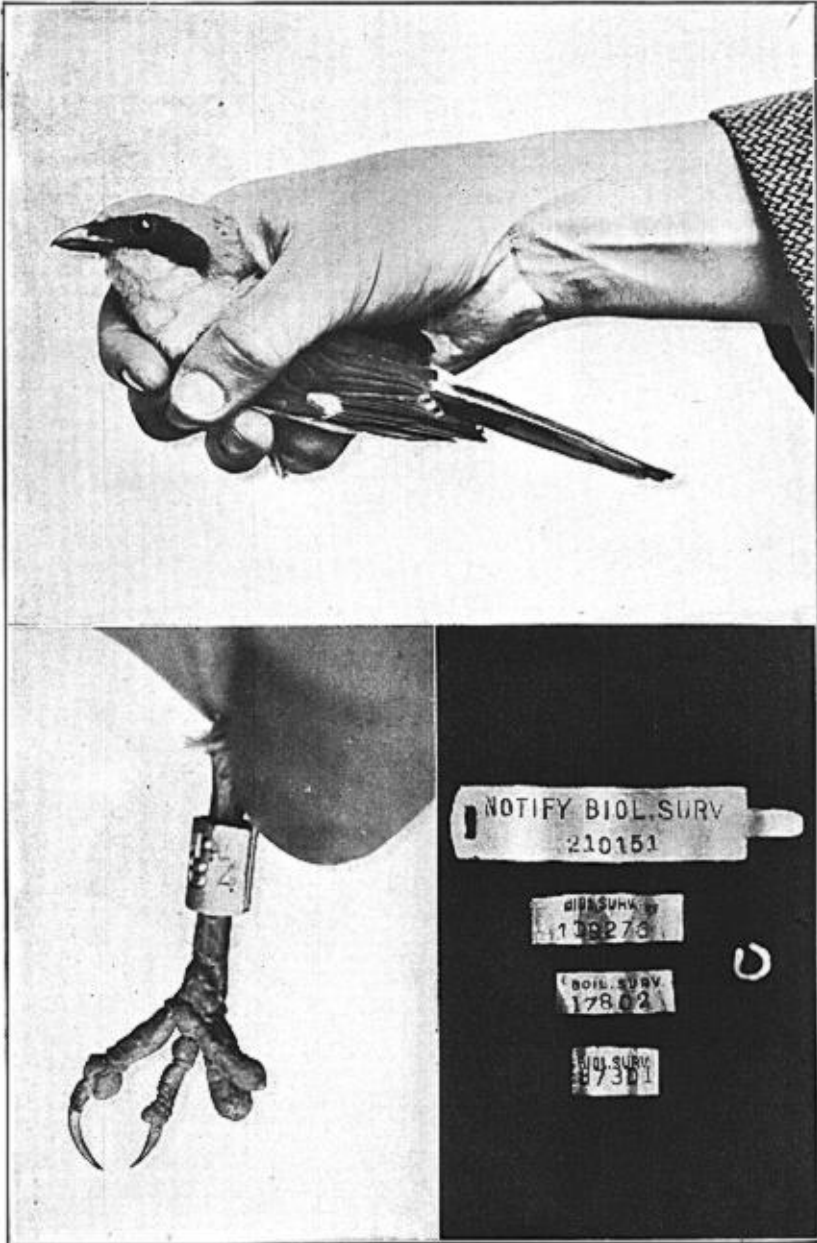
I found it necessary to remove the lower half of the leg of female Cardinal, 46048. The leg became crushed in some way and I was unable to place a splint which the bird could not remove. The leg was amputated on March 21, and it was healed by the 26th. On the 29th I caught the bird at trap G where it came to feed. She sometimes sank to the ground and rested on her body while eating but seemed not greatly inconvenienced and the fact that I caught her three times on the 29th shows that she had little fear of the traps, even after her accident.

The bob-legged Brown Thrasher, 53085, mentioned in the reports of former years was a very cautious visitor, yet I was able to catch it a number of times in my net trap "BB".

The smallest bird that I captured was a Ruby-crowned Kinglet which carries the band 37480. This bird was so small that while showing it to several friends, it deftly crawled through the three quarter inch mesh of the cage and escaped. That its capture was not a mere accident was proved when I captured it a second time. Whether it was attracted by the millet seed which I was feeding, or perhaps, by the bread crumbs, I do not know, but certainly one or the other must have taken it to the trap.

Of all the traps that I used, I feel that in point of number of new birds and repeats, the net trap "BB" is superior to all of those that I used.

Each morning shortly after the break of day tremendous flocks of Chipping Sparrows gathered under this net. They entered it with less apprehension than they did any of the other types. On one occasion I caught fifty-one birds at one fall. There was



1. Loggerhead Shrike the Pirate of Birdland.  
2. Infected Foot of Chipping Sparrow.  
3. Aluminum Bands. U. S. Biological Survey.

scarcely a day that it did not give me two or three catches, totaling from 15 to 25. Many times birds were included in such a catch which I had not recorded in any other trap for several weeks.

The following summary will illustrate the number of new and return birds, which I captured and banded.

Not only has my interest in bird study been stimulated, but I likewise have seen the great possibilities which bird banding opens to the scientific ornithologist when the entire country becomes thoroughly organized with banding stations.

I feel that we owe a great deal to Mr. Baldwin for maintaining the remarkable experiment at Thomasville and I hope that each year the observer who is fortunate enough to be selected to carry on the operations there will improve on the work. I can merely conclude with the suggestion that if any reader of 'The Auk' wishes to increase his interest and knowledge of birds, get one or two traps and start banding. Once he has started banding he will never stop, and science and the birds as well as he will be the beneficiaries.\*

BIRDS CAUGHT AT THOMASVILLE, GA., IN 1923.

NEW BIRDS.

Chipping Sparrow.....	519	Yellow Palm Warbler.....	1
Quail.....	13	Palm Warbler.....	3
Brown Thrasher.....	5	Mourning Dove.....	6
Mockingbird.....	2	Florida Blue Jay.....	5
Loggerhead Shrike.....	7	Blue Jay.....	1
Red-bellied Woodpecker.....	2	Myrtle Warbler.....	2
White-eyed Towhee.....	4	White-breasted Nuthatch.....	2
Red-eyed Towhee.....	2	Field Sparrow.....	2
Pine Warbler.....	5	White-throated Sparrow.....	6
Cardinal.....	20	Ruby-crowned Kinglet.....	1
Song Sparrow.....	2		

\* Mr. Musselman might well have mentioned the fact that he did not take this year the old Brown Thrasher 19247. Readers may recall that 19247 was banded in 1915 and taken last year (1922) by Mr. Talbot, the bird being then at least eight years old. Once before, in 1921, it was not taken and we then supposed it had died; so let us hope it may yet be alive and will be taken in 1924.

RETURN RECORDS

Chipping Sparrow.....	44	Cardinal.....	8
Brown Thrasher.....	4	Palm Warbler.....	1
Mockingbird.....	1	Florida Blue Jay.....	1
Red-bellied Woodpecker.....	3	Blue Jay.....	6
White-eyed Towhee.....	1	White-throated Sparrow.....	4

73

New Birds.....	610
Return Records.....	73
Repeats.....	3348
Total.....	4031

Quincy, Illinois.

NOTES ON THE NESTING BIRDS OF NORTHERN  
SANTA FE COUNTY, NEW MEXICO.

BY J. K. JENSEN.

*Plates XXVIII-XXIX*

It has been my good fortune to spend the five years 1918-1922 with the birds of northern Santa Fé County, New Mexico. Although my leisure for bird work has been very limited, I have spent some time in the field and succeeded in locating the nests of more than 100 species.

As the country hereabout is for the most part exceedingly rough, with only very few second and third class roads leading through, and the largest part only accessible by walking or with pack train, it is very difficult to thoroughly explore, and I am certain that a great many nesting species have escaped my notice.

The country examined forms roughly a square of some, 1,600 square miles. With Santa Fé as the center, I have taken in a good 20 miles in every direction.

Santa Fé is located at the foot of the Sangre de Cristo Mountains at an altitude of 7,000 feet. The southern part of my range has been the Indian Pueblos of Santo Domingo and Cochiti near the foot of La Bajada Hill, at an altitude of about 5,500 feet; the