nest here, but these are the only two occasions that I have observed them for more than a day at a time.

Cardinal (*Cardinalis cardinalis cardinalis*).—A common resident. Groups of ten or more females with one male are very common, while ordinarily in the winter the males are here in greater numbers.

Bronzed Grackle (*Quiscalus quiscula aeneus*).—A very abundant summer habitant and common this winter.

Rusty Blackbird (*Euphagus carolinus*).—On January 16, 1925, a flock of twenty Rusty Blackbirds was first seen in an apple tree feeding upon frozen apples. In a nearby lot was another apple tree. The flock alternated between the two trees spending most of their time feeding upon the frozen apples. By February 3 the flock had increased to fifty. They remained for several weeks. This is the only winter flock to come under my observation.

Red-bellied Woodpecker (*Centurus carolinus*).—A common resident and on the increase for several years, but unusually abundant this winter.—KATIE M. ROADS, *Hillsboro, Ohio.*

BIRD BANDING NEWS

Conducted by Wm. I. Lyon

CHIMNEY SWIFT BANDING

BY T. E. MUSSELMAN

When I received the government bulletin recommending the banding of Chimney Swifts I had little or no idea of how to proceed. I made several vain attempts in building traps. Finally, by watching the swifts I noticed that they dropped eight or ten feet immediately upon leaving the chimney. Using this knowledge I decided on an oblong trap 24x24x48 inches.

This trap I placed over the big Wabash Station chimney at 5:00 o'clock A. M.. At 6:00 o'clock, when the birds normally start to fly, they would not come out, because of the unnatural barrier above. I waited for three-quarters of an hour, then tried to stimulate their flight by dropping down the chimney a stick held by a string. This made them fly about in the chimney, but none would rise to the trap.

I then went to the basement with a flash-light, which I flashed up into the chimney. (No one should ever put fire in a chimney where swifts are roosting). This light stimulated an upward movement, and soon I had a trapful. There were about one hundred and seventy-five in the first trapful. The rest of the birds in the chimney I retained with a small screen which I placed over the opening. In this way I filled the trap three times. I used No. 1 bands, but believe that No. 1A is a better size. My supply of bands became exhausted, and I allowed the remainder of the swifts to escape. They continued to come out of the chimney for over half an hour.

Once the swift is in the hand it is a very tractable bird, lying quietly until thrown into the air. I had a newspaper lying on the top of the wall by my side, and I placed four swifts on their backs upon this paper, with their heads toward the sun. They all remained in this position, in a semi-cataleptic state, for five minutes, with eyes closed; and none made any movement until a strong wind blew one over onto his feet. Of course, as soon as one flew the rest took to their wings and were soon circling above.

In 1924 the last swifts departed for the south on October 17, but the last date in 1925 was one month later to a day. In 1925 few swifts were seen about town during the daytime after the middle of October; but at dusk as many as five or six hundred circled over the favorite chimneys, and it was at this time that I secured my largest catches.

Colder weather appeared and I discovered that on days when the thermometer indicated an approach to the freezing point the birds remained in the chimneys until about nine o'clock in the morning. During the daytime the birds quickly returned from their feeding over the river, circled but a time or two, and dropped into the chimney until warm.

In order to compare the temperature inside and outside the chimneys I lowered a thermometer into a chimney, and found a normal difference of twenty degrees. But the most popular chimneys were those which connected below with the basement, and served, therefore, as warm air flues. In such chimneys the temperature reached 70°. Little wonder that the birds preferred these chimneys on damp and cold nights!

On October 28 a severe snow storm forced the swifts into the chimneys. The next morning at eight o'clock I climbed the Wabash chimney and found probably three hundred swifts clinging to the sides of the brick wall four feet down, and in a solid mass, three birds deep, on all four walls.

At 9:30 A. M. on October 29 a number of birds left the chimney and circled, flying among the snowflakes for five minutes, but quickly returned to the chimney for protection. All day the temperature was about 32 degrees, and few birds left their retreat. As their food is 100 per cent insects, and no such life was flying, the swifts were without food. On this day I caught about seventy-five of the birds. Previously I had found an occasional louse and some body mites; but on this day my hands were covered with lice and mites after each bird was handled. Whether this was due to the cold, wet plumage or to the lack of body vitality in the host, I do not know; but I was literally alive with little red visitors when I took refuge in a tub of hot water.

On the 30th the day was cold, but the swifts were out for exercise. On the 31st it was much warmer, and many birds were out. They flew close to the ground, where they apparently found the insects just recovering from the cold. A few fell exhausted on the snow, and some returned to the chimneys. One was so weak that it flew up to the rim of the chimney and held on, being unable to rise to the opening. I caught this bird and banded it, and took it into the house until it was warmed; it was then able to fly away safely. At least a dozen people telephoned me about finding dead swifts, which had doubtless been exhausted before returning to their protecting chimneys. At the Wabash chimney I opened the base of the flue, and found about twenty dead birds. They had died of exhaustion and starvation.

The cold weather continued, and on November 16 the last swift circled over the town and departed for the south.

QUINCY, ILLINOIS.

BIRD BANDING PRODUCES AN INTERESTING RETURN.—Mr. Frank W. Commons banded a Slate-colored Junco on October 13, 1923, at Crystal Bay, Minnesota. This bird was re-trapped by Beecher S. Bowdish at Demerest, New Jersey, on January 9, 1926.

METHODS OF BANDING CHIMNEY SWIFTS IN THE SOUTH

BY HERBERT L. STODDARD

C. O. Handley and myself have been ably assisted by Sydney Stringer, who has a banding permit. The following are a few hastily gathered facts to give an idea how the Chimney Swift work has been handled.

On October 21, 1924, seventy-four swifts were taken, in a hastily constructed "Funnel type" trap, at Thomasville, Ga.

On September 1, 1925, another trap, which was called the "Celluloid top" trap was built and tried out at Thomasville and one hundred and sixty-two swifts were taken. September 9, 1925, we tried Tallahassee, Fla., where three hundred and twenty-five swifts were taken. This trap was discarded, however, because it retarded the swifts too much while emerging, so they would stop and rest (for hours), and had to be started by smoke or otherwise..

On September 19, 1925, there was no time to make another trap so the old "funnel type" trap was used again in Thomasville, and one hundred and seventy-seven were caught. We found that the swifts sometimes re-entered the chimney when they could not make their way to the outside world.

This trap was remodeled by putting in a diagonal partition from almost the top to the bottom, with another funnel against the side above. This trap worked perfectly but would have to be very large to hold all of the swifts in a chimney. Ours only held about two hundred and fifty when it had to be taken down and emptied, stopping the flow of swifts, which would have to be started again. At this time Mr. Handley took my old "celluloid top" trap apart and built another which we have called the "celluloid end" trap and this and the "modified funnel" trap mentioned above were used for the rest of the work.

On the morning of October 3, both of these traps were used in Thomasville, Ga., and 601 swifts were taken. We tried to adjust both of these again before daylight, on the 16th, but failed; and only the "modified funnel" trap was set up, catching 378. Next morning, the 17th, both traps were placed and 681 were banded and an additional fifty "repeats" taken. Our swifts left for the south before we could trap again.

On April 13, 1926, Mr. Handley caught 104 and fifteen were "returns."

We concluded that both the "modified funnel" trap and the "celluloid end" trap were perfectly satisfactory for trapping the swifts, but the latter is preferred because the birds are precipitated down the stovepipe extensions to carrying cages which are taken off as fast as filled, and even a thousand swifts in a chimney would not swamp us, and the emerging stimulus was not stopped. Really no trap should be used that does not meet these requirements, as smoking is dangerous if not thoroughly understood—and is mussy and bothersome besides. We found that a squeeling swift held in the chimney below frequently would re-start the flight and other more or less successful schemes were tried.

It is a great advantage, however, to catch all of the swifts in a chimney on the original daylight emerging stimulus, and the two traps mentioned will do it. All that is necessary is about a hundred feet of three-quarter manilla rope, plenty of assorted small rope, ladders of various lengths, flashlights, suits of coveralls, tennis shoes, plenty of nerve and a pull with the local police. With this equipment and two or three enthusiasts you can tackle the majority of chimneys in this region and band the birds by thousands.

Some of our results to date are as follows:

Swift number 37449A was banded at Daytona Beach, Fla., on August 6, 1925, by R. J. Longstreet and taken by us at Tallahassee, Fla., about two hundred and fifteen miles northwest on September 9, 1925. Number 28331A was banded by us in Tallahassee, September 9, 1925, and re-taken by us in Thomasville about thirty miles northeast, October 3, 1925. Number 96242 was banded by us in Thomasville, October 21, 1924, and re-caught a half mile distant October 3, 1925. One of our October 21, 1924, birds was "returned" from East Kingston, N. H., about June 15, 1925. We have caught one swift three times in the same fall and handled nearly a hundred twice but in no case has the same bird been handled twice in the same chimney.

We know that many of the swifts gathering in the Thomasville chimneys in the fall remain for some time, for several trapped September 1, 1925, were retaken October 16, and 17.

Our procedure in the swift work has been about as follows: One of our trio spots the chimneys the swifts are using in greatest numbers just before dark, gets permission from the building owner or janitor, keys if necessary, and makes all arrangements even to notifying police on the beat if necessary. (This is usually Stringer's job). We adjust our traps well before daylight on the chimneys and enjoy the prowl on schools, churches, or town halls. Then we set up a little table, camp chairs, lay out bands, previously arranged on wires in serial order, and the numbers entered and by that time the swifts are starting to emerge (depends on the sun, temperature, etc.) but usually well after clear daylight. One opens bands, another bands and the third enters all pertinent data. By such system we run them through the mill by hundreds in short order, and none are kept from their insect breakfast for long. We operated twice in Thomasville last fall on consecutive days, and several swifts missed their breakfasts by a few hours both mornings.

The work has proven extremely fascinating, and gives promise of digging out much of interest, especially if the work is carried out elsewhere on a large scale, for these birds must occur in untold millions over the continent. We are getting some interesting data together but as barely a start has been made, there is no use mentioning this in detail now. Rush of other work has prevented any activity in spring here but Handley's results the one time tried show the possibilities.

BEACHTON, GEORGIA.

A few years ago it became apparent to the Inland members, that to accomplish the great task of getting real returns in bird banding, the work must be speeded up in some way. The colony nesting birds seemed to offer the best chance, so the first efforts were directed toward the gulls and terns that were nesting in the northern part of Lake Michigan. The campaign has increased each year; and last year's total of the work, in the Inland District, amounted to over ten thousand birds banded through the quantity program, exclusive of the methodical trapping plan. The other districts have equally good records; and the outlook for the present season forecasts that the result will be doubled a number of times.

We need much help and co-operation for the coming season. You all can aid by reporting the location of any colony nesting sites that apparently will be used this coming season, so we may have a complete list of nesting sites that apparently will be used this coming season, so we may have a complete list of nesting sites for gulls, terns, cormorants, herons, etc. Then let us know as soon as possible if we can count on you to help, so you may be assigned a district to work. By careful co-operation there need be no duplication of effort, and parties need not go to the same place, unnecessarily disturbing the birds.

The Chimney Swifts, Bank Swallows and Purple Martins are local problems which you must work out for yourselves.

We are requesting a special effort to band birds that go to South America, such as Blue-winged Teal, all shore birds and swallows; also Black Terns, Bobolinks, Nighthawks and thrushes. This will help us to get results in a shorter time.

For Chimney Swifts, the trap designed by Herbert L. Stoddard solved the problem. He studied their habits of leaving the chimney, and observed that they did not rise skyward but just came up to the top of the chimney and volplaned sideways; and that any apparent obstruction stopped the exodus. So by using a glass end in the trap, with a chute below like the creeper trap, and a stove pipe extension it apparently allowed them to flow in a continuous stream into bags and boxes (have plenty), as at the bottom of a grain chute; and it suggests our hope that by using clear celluloid, like in auto curtains, for end and chute, one may get a wonderful moving picture of the continuous stream of birds.—W. I. L.

CHIMNEY SWIFT TRAP.—The illustration shows a suggested tray for Chimney Swifts. It is a combination of the chute in the Inland Creeper trap and H. L. Stoddard's trap. It shows the transparent end and transparent face of the funnel. It also shows a transparent pipe below the funnel and is shown in this way in hopes that some one with a moving picture camera will photograph a stream of birds going down the funnel and pipe into a bag or receiving box, and show the film at our next annual meeting. A metal stove pipe will be much more durable in actual service, then you can add any number of lengths to reach the roof.

The transparent celluloid used comes in sheets 20x50 inches and may be purchased from any auto curtain repair shop.. The bottom of the trap should have an opening as large as the flue of the chimney so as to not impede the flight of the swifts. The improvised chimney in the illustration lost its side in outlining the cut, but shows the correct position. The trap has been tried out with many species of birds and they all fly against the transparent end and continue to flutter until they slide down the end and through the funnel. The scheme may be used in other ways and it is hoped you will make an experimental trap.—W. I. L.