

More recently I have learned from A. F. Conradi, General Manager of the Southern States Chemical Co., Birmingham, Alabama, that in the truck growing regions of the south a greater quantity of arsenical spray (calcium arsenate) is used for potato beetles than for any other insect. He also states they have an open season for shooting the Bob-white.

It has been suggested that this evident scarcity of potato beetles may be due in part to the work of the Hungarian Partridge. It is true that these imported birds have become common on many Ohio farms, and some credit may be due them. But the Bob-white is much more generally distributed, and its habits are much better known; and we are much more inclined to regard this species as the principal cause of the recent scarcity of the potato beetle in Ohio.

STATE NORMAL COLLEGE.

BOWLING GREEN, OHIO.

CHIMNEY SWIFTS IN NOVEMBER, 1925

BY OTTO WIDMANN

As it is universally understood that the last Chimney Swift leaves the United States by the first of November, it was a great surprise, when on the afternoon of November 6, 1926, I saw eight swifts hunting up and down low over trees and houses in an outskirt of St. Louis, like in summer. My surprise would not have been so great, if an ordinarily mild October had preceded, but at the end of October and the first two days of November we had seven days of freezing weather. Once (October 30) the temperature was as low as 21° here in the city, and 16° in the county—the lowest temperature of any October day in sixty-two years. The weather was warm on November 3, 60°; on November 4 and 5, 58°; and on November 6, 56°; but where had the swifts been during the freezing days? They could not have found any insect food and probably had spent these cold days and nights in a warm chimney. Passing a week later the same way where I had seen the swifts on the 6th, I found that a high chimney had been built for a parochial school (Santa Rita) in course of construction. This was probably used for a roost, a most suitable place, because fireless and closed at the bottom, therefore draftless and warm. While I saw only eight swifts at three o'clock in the afternoon, there may have been hundreds coming to the roost in the evening, as I was not the only St. Louisian who saw swifts at that time.

In reply to a letter Mr. Luther Ely Smith, President of the St. Louis Bird Club, wrote me: "I recall very vividly on the afternoon

of Saturday, November 7 (a very rainy and dismal afternoon) being at Francis Field at Washington University to witness the Washington-Missouri football game. During the game something like two hundred toy balloons were released from time to time and they made a very pretty sight as they went up in the air. I was particularly impressed because the swifts that were darting about the sky continued their movements apparently quite scornful of the invasion of the army of color in the shape of green, red, and blue balloons that were marching through the sky. The incident and the unusual occasion fixes the date of these particular swifts in my mind."

Miss Jennie F. Chase, Secretary of the St. Louis Bird Club, wrote me on November 9, 1925: "I am glad to be able to contribute one tiny item to your swift story. Early Sunday morning, the eighth of November, I saw one swift from my window in Kimmswick—just one. There may have been more about, but I could not follow up the search."

The *St. Louis Times* of November 14, 1925, had the following article with the headline: "500 Swallows Found Dead in Alton Furnace"—"More than 500 dead swallows were carried from the furnace and bottom of the chimney at the house of Miss Alice Whiteside in Edwardsville, Ill., before the fire would burn. The swallows are believed to have entered the chimney several days ago and after two days of bad draft on the furnace the chimney was examined."

Mr. T. E. Musselman, of Quincy, Ill., who trapped swifts for banding, has the following to say about the unusually late presence of swifts in 1925 (WILSON BULLETIN, June, 1926, p. 121): "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 day time 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. . . . 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° 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 seventy-five of the birds. . . . 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. . . . A few fell exhausted on the snow and some returned to the chimneys. . . . A dozen people telephoned me about

finding dead swifts. . . . At the Wabash chimney I opened the base of the flue and found about twenty dead birds. The cold weather continued and on November 16 the last swift circled over the town and departed for the south."

More wonderful yet is what Mr. Robert Ridgway wrote me under date of November 6, 1925. He says: "I have some interesting information for you concerning the Chimney Swift; information that has surprised me greatly and for which I am indebted to Mrs. Ridgway. Would you believe that they are still here in *large* numbers? Well, they are. The last one that I myself saw was seen October 18; but Mrs. Ridgway, who is in Lawrenceville (about twenty miles east of Olney) saw them every evening (this evening included) pouring down the chimneys of the High School building, by thousands. She says their numbers are undiminished; each morning they pour out of the chimneys and fly westward and that, when they return in the evening, they come from the west. What do you make of it? Where do they find enough insects for food? It is evident that we yet have very much to learn as to the habits of *Chaetura*." On a later date Mr. Ridgway wrote me that Mrs. Ridgway watched the swifts carefully and found them in summer numbers up to November 13, but next morning (November 14) there were very few flying about the chimney and then disappeared.

Mrs. Ridgway's last date, November 14, and Mr. Musselman's, November 16, were beaten by Miss Katherine H. Stuart, who observed a swift at Alexandria, Va., on November 19 (*Bird-Lore*, 1926, p. 59). In *Bird-Lore* (1926, pages 11-12) Dr. Oberholser gives a list of fifty-seven latest dates of swifts in the United States. Among these we find only four November dates, viz., November 2, 1919, Pensacola Fla.; November 4, 1896, New Orleans, La.; November 5, 1913, Charleston, S. C.; and November 13, 1906, Richmond, Ind. There are nine dates between October 20 and 29, all considered exceptionally late dates. Dr. Robert Cushman Murphy was very much surprised to see a Chimney Swift flying above the snow-covered banks of the Miami River at Dayton, Ohio, on October 31, 1925. (*WILSON BULLETIN*, 1926, p. 157).

Thus we see that the mass, the millions of swifts, which spend the summer in the United States and Canada are gone after the middle of October, and all dates later than the twentieth of the month are exceptional occurrences, generally in small numbers. My latest dates of the last few years are 1917, October 21; 1918, October 10; 1919, October 19; 1920, October 26 (Jokerst October 29); 1921, October 17; 1924, October 19. To get these late dates I had to go to the big roost in the chimney of the greenhouse in Tower Grove Park, where they make no fire until it becomes really necessary, the superin-

tendent knowing of the swift roost. But one has not only to visit the chimney but also to watch its mouth closely, for in cool weather the few which come enter the chimney with little or no circling, come low and drop in immediately. Trusting to mere chance of seeing a swift on the wing one does not get those late dates. What kept them so extraordinarily late in 1925 and in such large masses as reported by Mrs. Ridgway is a mystery, though a great heat wave lasted in the Southern States till October 27, when it ended with a tornado in Alabama and zero and subzero weather in the Northwest.

It seems that the temperature alone does not decide the departure, as the record of 1924 shows. On September 2, 3000 swifts entered the Tower Grove chimney. On September 19, 4000; on September 26, 4800; on September 30, 3600; on October 2, 2000; on October 9, 2000; October 18, 60; and on October 19 only 10. The weather on the 18th and 19th was warm, 85° and 84° max., with all fall flowers in full bloom and the tropical water lilies, day and night bloomers, in Shaw's Garden and Tower Grove Park blooming so late in the year for the first time in fifty years. The change to cold came only on the 21st with frost on the 22d.

ST. LOUIS, MO.

HOW DOES THE TURKEY VULTURE FIND ITS FOOD?

BY JOHN B. LEWIS

A recent article in the *Auk* (July, 1928, pp. 352-355), by Mr. Alexander H. Leighton, entitled "The Turkey Vulture's Eyes," interested me greatly and called to mind some experiments I have made along similar lines, which may be of interest to others.

On January 19, 1927, a dead chicken was placed in an open field ninety yards from our home in a spot easily seen from the windows. A burlap bag was laid over the hen and a weatherbeaten box was placed over all to keep dogs from carrying the carcass away. Either the burlap or the box would have prevented the carcass from being seen, but would offer little resistance to the escape of odor. Either Mrs. Lewis or myself kept close, though not continuous, watch on the situation until February 21, without seeing a vulture near the box. At 10:30 A. M., on February 21, the temperature being just above freezing, the sky clear and a light west wind blowing, I removed the burlap and box from the carcass, placing the box four feet from it, so that if it had frightened the vultures away while the carcass was concealed, it would do so when the latter was exposed to view.