

NOTES ON THE INVASION OF NEW ENGLAND
AND OTHER ATLANTIC STATES BY THE
NORTHERN SHRIKE DURING THE WINTER
OF 1926-27¹

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THE occupation of New England by the Northern Shrike (*Lanius borealis*) during the winter of 1926-27, was so pronounced and widespread that I have attempted to obtain from the members of the Northeastern Bird-Banding Association and a few banders in the coast States between New England and Virginia information connected with their stay that would throw light upon the cause of their coming and perhaps also produce data of interest concerning their habits in this portion of their winter range.

Bird-banding has established many widely distributed observers in New England and the Maritime Provinces, who, particularly in the winter season, make daily observations on the happenings at banding stations. They, therefore, were able in response to a questionnaire sent them in March to furnish data regarding the number of Northern Shrikes present about their stations during this last invasion. Over three hundred and thirty questionnaires were mailed, and replies were received to over one half of them. In addition to these replies, I had the privilege of examining all of the correspondence sent to E. H. Forbush last winter by his regular observers, which was considerable and which contained no little amount of helpful information².

The records of one of the oldest observers, now a member of the Northeastern Bird-Banding Association, Charles J. Maynard, dating back to the year 1866, show that during the winter of 1866-67 there was a pronounced influx of Northern Shrikes. He states that early in October Redpolls and Shrikes were common in Maine and were abundant in Massachusetts a month later. At irregular intervals since that date published records show that New England has been similarly invaded by this species periodically. During some winter seasons they are seldom seen, but thus far no satisfactory explanation for this fluctuation in numbers has been offered.

¹Read, essentially in its present form, before the Nuttall Ornithological Club on May 2, 1927.

²In replying to the questionnaire observers generally did not, unfortunately, attempt to separate the Migrant Shrike (*Lanius l. ludovicianus*) from *borealis*.

Shrikes have been noted in unusual numbers during the winter just passed (1926-27) in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, and New Jersey. In the Province of Quebec they were present in the usual numbers. Robie W. Tufts reports from Wolfville, Nova Scotia, on December 17th that they were unusually plentiful in that section of the Province. However, it should be noted that while several banders report them unusually abundant, others in the same State and county merely noted an occasional bird.

The first Shrike of which I have record during the past winter season was seen in Massachusetts on October 28th by A. A. Cross in Huntington, whereas the species was observed in Connecticut a week earlier, October 21st, at the Birdcraft Sanctuary, Fairfield, and was reported by Warden Frank Novak. The date of last appearance in Massachusetts is April 14th. Charles J. Maynard, of West Newton, writes that according to his records the average final date of their stay in this State is April 10th.

Only two records of the Migrant Shrike were received,—the first on December 4, 1926, from Dr. Alexander Wetmore in Maryland, a rare occurrence in that State, and one from S. Gilbert Emilio, of Danvers, Massachusetts. The latter observation was made on September 1st and 5th and again on March 26th in Essex County, Massachusetts. The lack of records of this species which is rarely found in New England is, of course, not surprising, for it is difficult positively to identify it unless the birds are in hand.

Most of the answerers report only one Shrike to a given locality, but if that one was destroyed, another often took its place. Only occasionally was there more than one Shrike noted about a banding station at a time, and the appearance of a second one after the first was shot generally occurred where there was a concentration of smaller birds.

Observers occasionally witnessed the capture of small birds by this species which were captured both inside traps and about banding stations. Five observers report witnessing the capture of Tree Sparrows; three of Fox, Song, and White-throated Sparrows (one of each species); two of the Junco and Purple Finch, while three persons saw the Chickadee captured. These make a total of fourteen species and twenty-six individuals of residents or winter visitors that fell victims to the Shrike. To the list of species known to have been captured may also be added the Horned Lark and

Hairy Woodpecker,¹ possibly the Rosy Finch² and the White-winged Crossbill.³

The following table shows the number of persons seeing various species of birds destroyed outside of the traps:

NUMBER OF PERSONS WITNESSING THE KILLING OF THE

English Sparrow	Nineteen
Song Sparrow	Two
Tree Sparrow	Four
White-throated Sparrow	One
Fox Sparrow	One
Redpoll	Two
Goldfinch	One
Chickadee	Four
Starling	One
Myrtle Warbler	Four
Junco	Four
Robin	One
Golden-crowned Kinglet	One

Several reports are at hand of unsuccessful attempts to capture White-breasted Nuthatches, English Sparrows, Downy Woodpeckers, etc. In several cases where a Shrike pursued Nuthatches, the latter escaped capture by entering a hole in a tree or a nesting-box. The Downy Woodpecker often out-maneuvred its pursuer by constantly turning and dodging in the air rather than by flying away in an attempt to escape by speed, as do almost all the other small birds. Twice this winter I have personally watched a Shrike attempt to capture a Downy Woodpecker from above. Each time that the Shrike swooped to strike the bird, the Downy turned quickly in the air at a sharp angle, the Shrike overshooting its mark. It then turned with much more effort than the Woodpecker, and again took up the pursuit. So long as they were in sight and I saw the Shrike swoop a number of times the Woodpecker continued on its way apparently unafraid, and dodged each attack with ease. A condensation of reports sent in shows that almost invariably the Shrike seizes its victim from above, securing a firm hold and bearing the unfortunate bird to the ground, where repeated blows on the base of the skull or region of the nape soon kill it. The Shrike then often flies to a convenient nearby perch, where it surveys its kill, and if there are still signs of life, it once more descends and pecks violently at the head. When the

¹ Lincoln, F. C. *The Auk*, Vol. XXXII, 1920, p. 74.

² Warren, E. B. *The Auk*, Vol. XXVII, April 1910, p. 150.

³ Ferry, J. F. *The Auk*, Vol. XXIV, April 1907, p. 128.

victim is despatched, it is carried to a tree or shrub where it can be securely lodged or impaled.¹

Opinions differ widely as to the comparative ability of the Shrike and the Hawk as destroyers of birds. It is certain that this species has not the skill in capturing birds possessed by the Cooper's or Sharp-shinned Hawk or the Goshawk.

The Shrike has two methods of attack. The first is a rapid, unexpected swoop downward upon the intended victim from a perch. If this is not successful, the Shrike returns to its favorite post and waits for the excitement caused by its presence to subside and then launches an attack upon another bird. The other method is an out-and-out chase, which may prove successful. My personal belief is that the Shrike, while a rapid flyer, cannot turn and dodge in the air, thicket, or hedge, as readily as the smaller birds on which it feeds. Surprise and ferocity are the chief features of its attack. Observers have noted that many such pursuits are unsuccessful, the pursued outmaneuvering the pursuer and escaping by dodging or seeking refuge in a hole, thicket, or almost any haven that can be reached in time.

The question was asked whether or not the Shrike carried its prey in its bill or claws. The following are the replies to that question:

Persons observing the use of bill in carrying prey—Thirteen
 Persons observing the use of claws in carrying prey—Seven
 Persons observing the use of both in carrying prey—Three

During the six months from October to April, sixty-two Shrikes were reported destroyed by banders, while eight were banded and released.

Northern Shrikes are particularly destructive and annoying about a feeding or banding station². Their audacity is well known. They do not hesitate to seize a bird newly banded when it flies from the bander's hand, and they enter a trap, barn, room, or hen-house with absolute unconcern when birds or mice are seen there. In the trap they kill all the birds there before considering how they may escape or pausing to eat. A Shrike that was seen to enter an electric-car barn in pursuit of an English Sparrow killed all the Sparrows in the barn, without thought of itself or pausing to eat any of its victims. Another Shrike chased an English Sparrow into a

¹See *Bird-Lore*, Vol. XX, Nov.-Dec., 1918, p. 401, "Where the North Wind Blows," by A. A. Allen.

²Jensen, J. K. *The Auk*, Vol. XI, April, 1923, p. 333.

barn, where the bird, terror-stricken, crawled into a crevice. The Shrike was unable to reach its victim, but remained all day in the barn before abandoning the chase.

When intent upon the capture of its next meal, the Shrike loses all sense of fear of man. Mrs. Richard B. Harding writes that at her station in Cohasset, Massachusetts, a Shrike dropped upon a trap in which there were other birds, and attempted to effect an entrance. Its movements terrified the imprisoned birds, and although Mrs. Harding endeavored to drive it away by approaching the bird closely and shouting at it, the Shrike would not leave the immediate vicinity. When she went back into the house, the Shrike instantly returned to the top of the trap, and only after she secured a broom and actually struck at the intruder several times, did it give up and abandon the premises.

Mrs. N. P. Richmond, of North Middleborough, states that early one morning her attention was called to her feeding-shelf by the alarmed calls of a group of Chickadees. She says: "I rushed to the window-tray, and as I neared it, the Shrike flew to a rose branch within two and a half feet of my face. It sat there calmly, regardless of the fact that I made a pass at the bird and tried to scare it by screaming. The bird did not move until I went outside and flourished a towel, then flying only a few yards to an electric-light wire. Later on another came to the same place, chasing away the Chickadees which were feeding at the tray."

Concerning the destructiveness of Shrike at a banding station, Laurence B. Fletcher writes: "At my station at Cohasset, a Shrike came into an apple tree just over a trap in which there were three Juncos and one Tree Sparrow in the second division of the trap. The Shrike then landed on the top of the trap, greatly frightening the birds. When the Shrike found it could not reach them, it without hesitation entered the trap through the door, going directly into the division which contained the birds and killed them, one after another, by pecking them on the head. After this was done, the Shrike realized that it was trapped and tried to escape by climbing about the trap as other birds do. There was no evidence that the Shrike attempted to eat any of the birds."

Small birds often remain motionless or "freeze" when a Shrike is seen, as they do at the presence of a Hawk, and they thus escape capture.

It is suggested in a communication from Miss Harriet Flagg, of Springfield, Massachusetts, who observed a Shrike kill a Sparrow and fasten it in a lilac bush by forcing one leg under

a twig, that this bird did not spend all its time in search of prey. She writes, "I saw a Shrike fly and run after a dry leaf which was blown about by the wind. The bird seemed to be playing with it."

Arthur Morley, of Swampscott, Massachusetts, who kept a Shrike in captivity four days, fed it on the remains of five birds previously killed by the Shrike in a trap. All parts of the five birds were eaten except the wings, bill, and tarsi. The skull was also broken up and swallowed, so that nothing remained except as noted. Some time after a meal the Shrike would eject several pellets which measured from half an inch long to one and one-eighth inches. They averaged three-eighths of an inch in diameter.¹

This interesting observation is confirmed by Robert K. Smith, of Westfield, Massachusetts, who observed a Shrike kill and eat a Tree Sparrow within fifty feet of his study window. The Shrike occupied "an hour or so" in completing its meal, and when it had finished, nothing remained but the wings and some fine breast feathers, while among them was a pellet similar in appearance to those disgorged by a Hawk or Owl.

It has been suggested that the movements of Shrikes coincide to a considerable extent with a similar movement of species upon which they prey in winter-time, particularly the Redpoll and the Siskin, and that they follow flocks of these birds into New England and farther south. In order to test these theories, I have subjected the data available to careful study. There are many references scattered through the literature regarding the bird population in New England during the winter season, but the Christmas censuses published in *Bird-Lore* furnish the most sustained available information. Summed up, there appears to be little to support the view that the invasions by Shrikes coincide with the movements into New England of Redpolls, Siskins, or other northern species, in numbers, as will be seen by the following table:—

- 1911 Redpolls very abundant. Crossbills and Shrikes rare. Snow Buntings in usual numbers. Shrikes generally scarce.
- 1914 Redpolls and Crossbills scarce. Siskins very abundant. Shrikes usually well distributed.
- 1915 Redpolls, Crossbills, and Siskins rare. Shrikes scarce.
- 1917 Redpolls and northern birds generally abundant. Shrikes rare.
- 1918 Redpolls and northern birds rare. Shrikes abundant.

¹Floyd, C. B. *The Auk*, Vol. XI, July, 1923, pp. 542-543.

- 1920 Redpolls, Siskins, and Crossbills unusually abundant. Shrikes rare.
1922 Redpolls few, all northern species scarce. Shrikes very abundant.
1927 Redpolls and Siskins scarce. Shrikes numerous.

It will be noted that only in 1914 was a visitor from the North (the Siskin) present in numbers as well as Shrikes, an accordance too infrequent to be judged as other than a coincidence in the face of several seasons in which the appearance of Shrikes in large numbers was without an influx of Redpolls, Siskins, etc., as an abundant accompaniment. I have also been unable to link up the presence here of the Great Horned Owl and the Goshawk in winter with the presence of Shrikes, Redpolls, and Siskins.

Comparatively few persons appear to have heard the bird sing and know from experience the beauty of the song. The earliest date on which the song was heard is October 21st in Connecticut at the Birdcraft Sanctuary in Fairfield. Warden Frank Novak reported the observation. It may be that the warm weather on this date encouraged the singer, for no song records were reported during November, December, or January until the 30th of the last named month. During February and March, from Connecticut to Maine, the song was heard on various dates. L. McL. Terrill in Montreal, Canada, heard them sing on the 13th of February, and writes that by April 4th they were in full song. By far the greater number of persons returning the questionnaire did not hear the Shrike sing at all. A statement comes from Ruyard Bolton of the American Museum of Natural History that he heard their "call notes" on December 27th, but no song.

One of the indirect benefits that can be credited to English Sparrows is that they comprise a large part of the food on which the Shrike subsists during the cold months when wintering in New England, and because of the abundance of this Sparrow, the mortality among other and more useful species is undoubtedly lessened.

During the warmer days, even in winter time, when considerable bare ground exists, this species returns to its normal food-supply, which consists of small rodents and insects.

Auburndale, Massachusetts
July, 1927