A REMARKABLE RECOVERY OF A BANDED LINCOLN'S SPARROW

By Mary Heimerdinger Clench

It was the sort of thing that bird banders hope and work for, but few are ever fortunate enough to experience. At Powdermill Nature Reserve, in Westmoreland County, Penna., over 50,000 birds have been banded, and I doubt if the laws of chance were ready for it to happen. But happen it did. This spring one of Powdermill's migratory birds was found, only two days after it was banded, at the remarkable distance of 350 miles away. And if it needed spicing up (which it didn't), this recovery was exactly the 100th received since banding banding began at Powdermill, and it was the first for this particular species.

On May 15, 1968, at 11:30 a.m., Robert C. Leberman, Resident Bander at the Reserve, banded and released an adult Lincoln's Sparrow, number 74-59317. This, and another banded at 2:25 p.m., were the only birds of the species captured that day.

Lincoln's Sparrows are usually considered to be rather uncommon birds in the eastern United States, but at Powdermill a few are always banded in the spring (65 since 1962) and a good many in the fall (584 by the end of 1967). In the spring of 1968, 11 were banded, an average catch for that season, between May 10 and June 1; the two on May 15 were the 6th and 7th of the year. Lincoln's Sparrows normally occur in Pennsylvania only during migration, when they have been captured at Powdermill between April 30 and June 1; and September 3 to November 5. Also, four stragglers have been caught out of their normal season: one in mid-March, two in early August, and one in early December.

Although Lincoln's Sparrows are more common in the western U.S. than they are in the east, they are not so rare in this region as many birders think. They are, however, exceedingly shy and secretive birds, keeping to tangles of underbrush and marshy thickets. They seldom sing on migration, uttering only a Junco-like "chip".

When Bob Leberman banded this particular Lincoln's Sparrow at Powdermill, he measured the wing - 62 mm. long, and found very heavy fat deposits. It weighed 18.7 grams. These last two facts have the greatest significance. When banding is done in the same location throughout a migration period, as at Powdermill, it is possible to see a pattern in the weight changes of migrants. One morning the Reserve may be full of unbanded birds which, when examined, have little or no stored fat, and weigh about the minimum for their species. These are migrants that have come in early that morning from a long overnight flight. They have used up their fat - stored energy for migration - and are often tired, even exhausted. During the next few days some of the birds caught when they first arrived may be recaptured, and it may be noted that they are getting heavier and that fat is beginning to build up under the skin again. In a

few days the birds have fed and rested enough. They once more have heavy fat deposits, and they tip the scales at several grams more than they did when they first arrived. The next clear starry night they disappear from the Reserve; they've left on the next leg of their migratory flight.

When the Lincoln's Sparrow was banded, it may have been in the local area for a few days, for it was very fat and heavy. Obviously, it was ready to begin migration again as soon as the weather was favorable.

Checking back into the weather records for Powdermill and for the U.S. Weather Bureau's stations at the Pittsburgh airport and the Federal Building downtown, we found that from the time the sparrow was released on May 15 until the late afternoon of May 16, the weather was cloudy with intermittent rain and thundershowers. By 10:00 p.m. on May 16, the weather had cleared; it was a cloudless starry night, and the wind was blowing from the southwest at an average of 13.1 miles per hour. The night before, the wind had not been so strong - 7.6 mph. from the south-southwest - and the skies were completely overcast. Lincoln's Sparrows, like most of the small songbirds that migrate at night, are believed to navigate by star patterns, and so will not begin a flight unless the sky is relatively clear. Birds also tend to wait for a following (tail) wind before attempting to migrate. Our sparrow, therefore, probably waited in the Powdermill area until the evening of May 16 before beginning its flight.

Here our story becomes rather sad. It is a fact of life that some birds fly so far on some legs of their migration that they come down in a completely exhausted condition. The reports of banders and bird watchers on the coasts of Texas and Louisiana are famous for their tales of birdsliterally dropping out of the sky. These are birds that have made it, non-stop, across the Gulf of Mexico. They usually rest and feed along the beaches for a while and then go on. We have seen the same phenomenon at Powdermill, where birds do not have a major obstacle such as a body of water to fly over. Early one morning in May, while A.C. Lloyd was putting up some nets, a bright male Scarlet Tanager dropped at his feet. He picked it up, saw it was exhausted and only semi-conscious, so he put it in a safe place to give it a chance to recover. An hour or so later it woke up looking good as new. He then banded and released it, none the worse for its experience. Our Lincoln's Sparrow was not so lucky.

About 8:00 on the morning of May 17, Tibby, a cat belonging to Mr. and Mrs. P. Roy Wheeler of Lee, Massachusetts, appeared on their porch bearing our Lincoln's Sparrow in her mouth. We will never know, of course, just what happened, but it is a safe guess that Tibby discovered the bird just after it had come down from its long flight, and it was too weak and exhausted to escape. It is another fact of life that these accidents do happen. Because Tibby's sparrow was delivered to the porch in perfect

condition (bearing no signs of a struggle) we are also led to conclude that the bird was picked up in a very weakened condition.

In late September, we received a card from the U.S. Fish and Wildlife Service reporting that band 74-59317 had been recovered in Lee, Mass., on May 17. Reference to a map showed that Lee is in northwestern Mass., close to the New York border, and approximately 350 air miles northeast of Powdermill. We wrote the Wheelers for confirmation, and many of the above details were kindly supplied by Mrs. Wheeler. She also reported that she keeps a diary, and so is sure of the date and time that Tibby brought the bird in. She wrote that they keep their cat in the house at night, so the sparrow must have been found that morning. Mrs. Wheeler much regretted that Tibby had caught the bird but, like us, she was at least pleased that the band recovery had made a significant contribution.

Piecing these bits of information together - the recovery card from the Fish and Wildlife Service, the original Powdermill data card filled out when the bird was banded, Mrs. Wheeler's details on the capture, and the weather records - produces a fascinating story that we are fairly sure is correct. We know for a fact that the bird was found 350 miles away, about 44½ hours after it was released. The local weather and knowledge of birds' migratory habits indicate that the sparrow did not leave the day it was banded, but took off some time early on the night of May 16-17, and accomplished the long distance flight in just a few hours. Even if the bird had started flying the moment it left Bob's hand, and was caught and delivered promptly by Tibby at 8:00 two mornings later, it would have had to have flown at an average speed of eight miles an hour. 44½ hours of continuous flight is, of course, most improbable. An educated guess is that the sparrow made the flight in less than twelve, perhaps in about eight hours, and averaged from 30 to 45 miles per hour - figures that agree well with migration speeds calculated from other studies.

Aside from the satisfaction derived from the scientific contribution this recovery has made, we are left with another very strong feeling - that of the incredible luck involved. Banding the bird just as it was physiologically ready to migrate, having a local weather pattern that makes it fairly certain when the sparrow left, Mrs. Wheeler's habit of keeping a diary so she could be certain of the time and date of recovery over four months after it happened, the cat bringing the bird home rather than making a breakfast of it, and having such a secretive and skulking species found at all, add up to a highly unlikely and very lucky set of circumstances. We feel very fortunate to have been instrumental in proving that a little bird that weighed less than 7/10 ounce could fly 350 miles in such a short time.

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