in the South with the birds last seen at Charleston May 2nd and North Carolina departure dates ranged from May 2nd to 15th. Virginia departure dates ranged from March 21st to May 14th, Pennsylvania from May 1st to 19th, and New York State from May 11th to June 1st. New England last dates were April 29th to May 17th for Connecticut, May 12th to June 6th for Massachusetts, May 22nd for Vermont, May 6th to 24th for New Hampshire, and May 4th to 31st for Maine. In southern Ontario the departure dates ranged from May 14th to 27th. However, in New Brunswick the picture was very different with grosbeaks scarce in the Province all winter but returning in the middle of May in great numbers to breed.

As noted in past years the female grosbeaks tended to penetrate more deeply into the wintering grounds than the males. Flock sizes were variable over the winter range from a few birds to over 100 with the largest numbers noted in various areas. Banding was carried on at a number of stations, 31 of which reported to us a total of 7,152 grosbeaks banded during the winter of 1957-58. Undoubtedly more were banded and these records sent to the Banding Office. However, in comparison with other years it is interesting to note that since 1950 this is the 4th highest total for one winter season, the record being 12,404 birds banded in 1955-56 by 33 stations. The number of late departure dates and the several reports of courting seemed to indicate an extension of the summer range and we can look for more widespread summer records in the future.

159 Elm Street, Northampton, Mass.

THE DESTRUCTION OF NEARLY ONE HUNDRED EVENING GROSBEAKS AT ST. LEON le GRAND, QUEBEC*

By B. M. Shaub

Our research station receives from the Bird-banding Office of the U. S. Fish and Wildlife Service, from time to time, reports on the activities of bird-banders and others who supply information concerning the Evening Grosbeak (Hesperiphona vespertina). During the latter part of 1959 and in January of 1960, we received some startling reports concerning the collecting of large numbers of Evening Grosbeaks in Rimouski County, Quebec. On the 15th of February I wrote to the collector asking for information concerning the birds he had collected and which were banded at our station. Not ever expecting to hear from him, I was astonished at receiving a reply in less than a week. While he refers to himself as a "French Canuck" and states that English is not his language, his letter is in an excellent hand writing, far better than that of most of the students in the college where I taught. In his letter he frankly related the facts concerning his activities in collecting the Evening Grosbeak in his vicinity. He wrote that the "first one was killed by my cat and I showed that to my American fisherman and he told me to go ahead and get all I can to cooperate with the U.S. Wildlife Service.

^{*}Contribution Number 25 from the Shaub Ornithological Research Station, Northampton, Massachusetts.

Vol. XXXI 1960

I did (not) know they were protected, now I know because some have reported me and I am fined. Now on I will not kill any more my curiosity is finish. Those birds stay all winter and summer here; they hang on the thick spruce. During last summer they were thicker than before. It is only 3 summers that I notice that kind of Evening Grosbeak."

Here we can clearly see that the killing of a large number of Evening Grosbeaks, at least 94, was the direct result of a vociferous American speaking out of turn and without knowledge or authority and thereby directly influencing the actions of an otherwise innocent man so as to cause him to be arrested and fined for violating a law unknown to him and at the same time to bring about the destruction of some ninety birds.

In a subsequent letter dated March 19, 1960, Mr. Brousseau throws much additional light on the manner in which the Evening Grosbeaks were collected. With the exception of the addition of a few punctuations and capital letters at the beginning of sentences his picturesque English follows: "I'll try to answer all your questions. The sport that told me to kill the birds, they have shot some themselfe event one ladie have shot one and they have taken the band along with them. Myself I have not shot more that 15 all others have been shot by sports, but me I take the responsibility to send them to Washington. There is a lot of peoples that have shots some and will never be reported. My friend on Kedgewick River done the same. It happen to call me over the telephone and say that he kill yellow birds with Band on. He ask me if I would report them for his so I did. I have 42 reports from Laurel. The distance between the two camps on River it 11 miles. But my dear Sir there is lots of you bird that never will be reported because the Govt. and Company that hold timber Limite they have sprayed DDT for the Bud Worm for two summer and along the road we have found lots of dead birds event longside the river we have found lots of fish dead the last summer that they spray they had order to shut off longside River and Lake. I believe the biggest lost it was among the Black Capped Chicke. We have shot the bird with rifle 22 only the one with band on." - - -

"About the fine I'll take my medicine like a man but it will be a sure cure for me. It don't take much to put yourself in trouble. There is an old saying that you don't go to war without lossing any feathers. I am going on the river again next summer but believe me I will leave the nice little birds alone because they are cute and don't do no harm. It lively to have them around you camp."

It is regrettable that hunters and fishermen who look upon themselves as, and want to be known as, fine sportsmen and live by all the rules when they are in good company, however they are so often actually the opposite especially when they are out in the great out-of-doors. Instead of enjoying the natural beauty around them they become killers like the cats, those arch killers of wild life; they want to get their "paws" on the beautiful living things and to do so they use firearms or other weapons of destruction. Not only the male "sports" become killers but at least one female of the same species has reverted to the killer state and for her trophy she took home the leg band which identified the bird.

Mr. Brousseau, especially, has my sympathy for the unforeseen trouble that came his way for believing the information given him by one of his "sports." The censure should have included first and more justly the instigator of the collecting program and the others who so freely contributed to the destruction of the many beautiful Evening Grosbeaks. We hope that Mr. Brousseau finds his woodland friends as cheerful and lively about his future camps as they have been in the past.

Now that we have exonerated the collectors Messrs. Thomas Brousseau and Paul Boulanger of St. Leon le Grand, Quebec, we should look carefully at the data provided by this wildly irregular endeavor at cooperation. The data supplied are most unusual and have no equal concerning the Evening Grosbeak, or possibly any other bird that has been banded in numbers and collected during its breeding season.

For a period extending over 49 days from the 22nd of June to the 9th of August inclusive, 1959, the 94 banded birds were collected on



Fig. 1. Outline map giving location of St. Leon le Grand, Quebec and the localities where the Evening Grosbeaks were banded.

Vol. XXXI 1960

their nesting grounds. These birds were banded at 47 localities, Fig. 1, in the northeastern part of the United States and two localities in Canada. The banding localities and the number of birds banded at each and collected at St. Leon le Grand, Quebec, are as follows: Adams, Mass. (1); Amsterdam, N. Y. (5); Athens, Pa. (1); Battle Creek, Mich. (1); Bedford, N. H. (2); Bennington, Vt. (1); Berwick, Pa. (1); Bethel, Vt. (1); Bloomfield, Conn. (1); Bowdoinham, Me. (1); Burlington, Vt. (3); Candia, N. H. (1); Conway, Mass. (2); Cumberland, Me. (2); Deposit, N. Y. (6); East Chatham, N. Y. (3); East Greenwich, R. I. (1); Franklin, N. H. (1); Freeland, Pa. (2); Hanover, N. H. (2); Hartford, Conn. (2); Hawk Mtn. Sanctuary, Kempton, Pa. (2); Kingston, N. Y. (1); Lambertville, N. J. (1); Ledyard, Conn. (4); Lewiston, Me. (1); Lexington, Mass. (4); Mansfield, Conn. (1); Middleboro, Mass. (1); Midland, Mich. (1); Montoursville, Pa. (1); New Hampton, N. H. (1); Northampton, Mass. (2); Oneida, N. Y. (1); Ottawa, Ont. (1); Reading, Mass. (2); Richmond, Va. (1); Rye Beach, N. H. (1); Saxton River, Vt. (1); South Hamilton, Mass. (2); South Londonderry, Vt. (3); State College, Pa. (7); Storrs, Conn. (2); Syracuse, N. Y. (1); Toronto, Ont. (1); Ware, Mass. (6); Watertown, N. Y. (1); Weston, Mass. (1); Wolfeboro, N. H. (3).

In checking the reports one finds some indications that there was considerable flock cohesion for such small numbers accounted for from the various stations. The unusual factor is not that they were banded on or near the same day but that they were taken on the same day at St. Leon le Grand, Quebec from the same banding locality. For example



Fig. 2. Diagram showing date and number of Evening Grosbeaks collected from June 22nd through August 9th, 1959, in the vicinity of St. Leon le Grand.

on July 6th two birds, both males banded at Amsterdam, N. Y., one banded in 1956 while the other was banded in 1958, were taken. On July 6th also, three birds, all males, were taken that were banded at Deposit, N. Y. in January and February 1959. On the next day two more birds banded at Deposit, N. Y. were taken, one a male, the other a female; both were banded in 1958. On the 8th of July, two birds banded at Reading, Mass. were taken. These were both females, one banded in 1956, the other in 1959. Two birds, a male and a female, banded at Freeland, Pa. in March, 1959 were taken on July 10th. In a few other instances birds from the same station were taken on the same day or within a day or two of each other.

Of the 94 Evening Grosbeaks involved in the reports received from the U. S. Fish and Wildlife Service, 66 were reported as collected by Thomas Brousseau, R. R. No. 1, St. Leon le Grand, Quebec and taken on the west branch of the Patapedia River in Rimouski County and 28 were reported as having been collected by Paul Boulanger, R. R. No. 1, St. Leon le Grand, Quebec on the north branch of the Kedgewick River in Rimouski County, Quebec, Canada. These rivers flow south and east to enter the Restigouche River which separates in part the Gaspe Peninsula and New Brunswick. We have received reports from residents of New Brunswick over the past decade that numerous gros-



Fig. 3. A survival chart showing the number of birds in the sample plotted against the years in which they were banded.

Vol. XXXI 1960

beaks have been encountered during the summer in the Restigouche River area, hence the collecting of nearly a hundred Evening Grosbeaks in this general area during the summer of 1959 is not at all surprising. It now appears that the forest areas of the Gaspe, Northern Maine and New Brunswick have become the general breeding grounds for at least a considerable part of our Evening Grosbeak population which migrates southwesterly into the New England and portions of the Middle Atlantic states, especially along their more mountainous and rugged areas.

The rather rugged physiographic and wooded nature of the terrain in the northern part of Maine and the parts of adjoining Canada, together with suitable food possibilities for rearing their families, have been the deciding factors in encouraging these birds to select the area as a breeding territory. The adoption of this area appears to have been made within the past decade and possibly during the latter half of this period as Mr. Brousseau states that he only noticed the birds three years ago. In his second letter, see below, he mentions the presence of bud worms which may have had some influence on the area being selected for nesting. The smaller populations of these birds may go unnoticed for years. That such a situation is not only a real possibility but rather a probable one is the fact that during the past two autumns, while examining mineral localities and also while hunting in western Maine, I very frequently observed these birds and for periods it was a daily occurrence to see or hear flocks of Evening Grosbeaks which were completely unnoticed by my companions. Hence it is difficult to fix a given year as the actual date when a limited number of Evening Grosbeaks first accepted the area as an important breeding ground for the species.

It is interesting to note from Fig. 2 that the geratest number of birds were taken during the first two weeks of July, which is probably the time, or near the time, when the fledglings are already away from the nest or at least close to the time when they are fully feathered. During this period the adults are most actively gathering food and feeding the young. They would be far more likely to come around residences, where food is probably easier to find than in the dense spruce and evergreen forests. It would therefore be much easier to collect the adults, all other factors being equal. It appears that the same phase of the nesting cycle of the Evening Grosbeak at Saranac Lake, N. Y. and at South Londonderry in Vermont comes about two weeks earlier, from the records obtained by banders at these localities. Of course after a considerable number of adults were removed, as during the first two weeks of July, the numbers available for further collecting undoubtedly would be substantially reduced and a situation of diminishing returns would develop. Again the pressure of collecting may have diminished also. On the other hand the adults and the juvenals, as the latter became more mature, would be more wary and would no doubt search out greater seclusion in the more forested areas where they would not be as easily found and become targets for collectors.

The sex ratio of the birds collected and reported by the U. S. Fish and Wildlife Service is 53 males and 41 females. While this ratio shows that about 25 per cent more males than females were collected, it may be the result of one or more of several factors. If the adults were taken during the first few weeks after the young left the nest the males would

Bird-Banding July

be more vulnerable for they do most of the feeding of the young during this time and up until the juvenals shift for themselves. The males are also much more conspicuous and may have been singled out from the females and juvenals, which went by unnoticed. Another factor may be that during the banding seasons of the first four months of 1958 and the like period of 1959 there were considerably more males banded than females as the flock composition in the banding areas is known to vary considerably from year to year.

In looking at the data concerning the 94 birds collected one may correctly view them as a random sample, although much too small for the probable Evening Grosbeak population in the northeastern United States and the adjoining area of eastern Canada. In Fig. 3, I have plotted the number of birds collected against the year in which they were banded. From this graph we see that the oldest birds were banded in 1953 making them at least 6 years old; they could be seven or eight or more years old for they could have been two or more years old when they were banded. None of the birds collected were banded in 1954 and only two were banded in 1957. During 1954 and 1957, the incursions of grosbeaks into the populous bird-banding area of northeastern United States were low in numbers of birds present and numbers banded, hence the number collected from these years should show a much lower number present in the sample. The dotted portion shows the approximate number of birds that one would expect to find in the sample collected had a proportional number of birds been banded during these years. Such a lack of birds for 1954 and 1957 could also indicate that during these years there may have been proportionally a smaller number of young birds surviving the nesting season, possibly due to adverse weather conditions or other causes such as possible widespread DDT spraying for insect control in the Evening Grosbeak nesting areas.

For the size of the estimated Evening Grosbeak population in the northeastern part of the United States and the adjoining provinces of Canada, one should have a sample approximately 8 to 10 times the number of birds collected by Brousseau and Boulanger. Such a sample would raise the height of the curve, Fig. 3, 8 to 10 times and extend it 3 to 4 places to the left where the oldest birds would appear. From such a sample one would expect the graph to show that one or more Evening Grosbeaks would appear with 9 to 10 summers behind them and the birds would be very, very old ones. Such an age would probably be reached by only a few birds and rarely if ever would a bird reach a dozen years in age.

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156]