

ON SOME RESULTS OF RINGING GREENFINCHES.

BY

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A VERY considerable number of Greenfinches (*Chloris c. chloris*) has been ringed under the *British Birds* Ringing Scheme and there have already been recoveries enough to make it worth while to analyse these records and see if any definite conclusions can be drawn from them.

Between 1909 and 1930, 8,814 Greenfinches were marked: 190 of those ringed between 1909 and 1929 were recovered—an average of 2.2 per cent., and of those ringed in 1930 also a number has already been reported.*

It will be best to tabulate the recoveries first of all, and for that purpose the most convenient system is probably that used by Dr. A. L. Thompson when he worked out the recoveries of marked Starlings (*British Birds*, Vol. XVI., pp. 62-76).

Though the birds have been marked in a number of localities in Great Britain—from Perth to Devon—the recoveries may safely be tabulated together, as the results from one locality or another do not seem to differ in principle.

The recoveries may be divided into the following groups :—

- (i) Those marked as nestlings or young birds between April and August.
- (ii) Those marked as adults in summer between April and August.
- (iii) Those marked as adults in winter between November and March.

Birds which have been recaptured several times are recorded in these tables once only for each season in which the recovery took place. When recaptured *only* within very few days of ringing (as they most frequently are) they are not included in this tabulation.

* The recoveries made under the Aberdeen University Scheme were as follows :—

First Interim Report (1909-12), *Scottish Naturalist*, 1912, pp. 241-247. 39 recoveries, 22 within a short time of marking. Of the remaining 17, 9 were marked as adults in winter and recaptured in or near the same place, 5 in the next winter and 4 in April, one and two months after ringing; 8 were ringed in summer as adults, young and nestlings, and of these, 6 were found in or near the same place in the following winter, 1 ringed at Inverurie, Aberdeen, August 23rd, 1910; at Melvich, Sutherland, February 12th, 1912—107 miles N.N.W., and 1 marked in May in the same place in May two years later. These should be compared with the tables in the present paper.

Second Interim Report (1912-14), *Scottish Naturalist*, 1915, p. 315. 12 recoveries of little interest, in or within 5 miles of the place of marking; 11 of them in about two months, and 1 after eight months.

(i) MARKED AS NESTLINGS OR YOUNG BIRDS
between April and August.

36 recoveries (6 not included in the table).

Year of bird's life (beginning from April 1st of bird's first year.	(A) Recovered at or near place of marking.		(B) Recovered more than 10 miles from place of marking.	
	April/Sept.	Oct./March.	April/Sept.	Oct./March.
1st year ...	2	10	—	6
2nd year ...	3	3	1	—
3rd year ...	3	—	—	—
4th year ...	—	2	—	—

Details of (B) in the above table.

Number.	Date of marking.	Where marked.	Date of Recovery.	Place of Recovery.	Distance.
B.57	20.6.10	Cheadle, Staffs.	2.4.11	Le Catelet, Aisne, France	335 m. S.E.
5073	24.6.11	Torrance, Stirling	4.12.11	Cove, nr. Aberdeen	110 m. N.E.
81014	17.5.16	Lytham, Lancs.	10.16	Badminton, Glos.	155 m. S.
JN.34	14.5.21	Southport. Lancs.	3.22	Marygate, York.	85 m. E.N.E.
A.8718	20.7.23	Streatham, London.	19.12.23	Lower Ed- monton, London.	14½ m. N.
F.9852	5.28	Penrith, Cumb.	circ. 26.12.28	Maryport, Cumb.	30 m. W.
H.2682	6.29	Langwathby, Cumb.	19.1.30	Peacehaven, Sussex.	290 m. S.S.E.
Aberdeen Univ.	23.8.10	Inverurie, Aberdeen.	circ. 12.2.12	Melvich, Sutherland.	107 m. N.N.W.

AU.799A (age not stated).

(ii) MARKED AS ADULTS IN SUMMER—April to
August.

55 recoveries (17 not included in the table).

Year of marking (dating from April 1st of year of marking).	(A) Recovered at or near place of marking.		(B) Recovered more than 10 miles from place of marking.	
	April/Sept.	Oct./March.	April/Sept.	Oct./March.
1st year ...	17	7	—	1
2nd year ...	8	4	—	—
3rd year ...	1	—	—	—

Details of (B) in above table.

<i>Number.</i>	<i>Date of marking.</i>	<i>Where marked.</i>	<i>Date of Recovery.</i>	<i>Place of Recovery.</i>	<i>Distance.</i>
J.201	19.4.13	Sandhoe, Northumb.	—.2.14	Seaham Harbour, Durham.	35/40 m. E.

(iii) *MARKED AS ADULTS IN WINTER—November to March.*

154 recoveries (37 not included in the table).

<i>Year of marking (dating from October).</i>	<i>(A) Recovered at or near place of marking.</i>		<i>(B) Recovered more than 10 miles from place of marking.</i>	
	<i>Oct. March.</i>	<i>April Sept.</i>	<i>Oct. March.</i>	<i>April Sept.</i>
1st year ...	44	28	—	3
2nd year ...	30	2	2	—
3rd year ...	11	1	—	1
4th year ...	2	—	—	—
5th year ...	1	1	—	—
6th year ...	1	—	—	—

Details of (B) in above table.

<i>Number.</i>	<i>Date of marking.</i>	<i>Where marked.</i>	<i>Date of Recovery.</i>	<i>Place of Recovery.</i>	<i>Distance.</i>
B.9136	3.3.25	Frandlely, nr. Gt. Bud- worth, Ches.	5.12.25	Selby, Yorks.	70 m. N.E.
E.9649	3.3.27	do.	14.6.27	Hale, nr. Liverpool, Lancs.	11 m. N.W.
E.9546	28.1.27	do.	21.4.29	Sale, Ches.	12½ m. N.E.
H.3890	26.1.29	do.	Late 2.30	Ferryhill, Durham	107 m. N.E.
H.4028	5.3.29	do.	2.6.29	Kirkdale, Liverpool.	21 m. N.W.
J.5062	22.3.30	do.	<i>circ.</i> 20.4.30.	Nr. Walsall, Staffs.	55 m. S.S.E.

EXTENT AND DIRECTION OF MOVEMENT.

In dealing with the tables drawn out above, the recoveries of birds in or near the same place would appear to be overwhelmingly more numerous than those at any distance from the place of marking, and though this is significant too much stress must not be laid on it; all, or practically all, those marked as adults were, of course, trapped, and Greenfinches, more than most birds (as will be seen later), will return time

after time to the same trap and thus be noted as recoveries, and at the same time at any trapping station ringed birds are expected and examined, whereas other records depend on casual recoveries, many of which doubtless are never reported in the proper quarter.

TABLE (I). MARKED AS NESTLINGS OR YOUNG BIRDS.

To these the above objection does not really apply, as comparatively few of the recoveries have been made by retrapping and the results give a real and unbiassed idea of the birds' movements after leaving the nest.



Sketch map to illustrate movements of Greenfinches ringed as nestlings and young birds. (See Table i, B.)

By far the most remarkable recovery was made in N.E. France, 335 miles S.E. from the nesting-place; strangely enough, it was the first marked Greenfinch recovered under the *British Birds* Scheme and it is still the only one found outside Great Britain!

It will be seen from (i) (B) that there are two other instances of a decided move south in winter, but of the other records

in this table only one is really notable—the discovery in November 120 miles N.E. of its nesting-place of a bird ringed near Glasgow ; this bird was one of eleven in Table (i) which were marked there, most of which were found within three to four miles and one within ten miles of their place of origin.

All other recoveries were made within five miles of the place of origin. This gentle scattering apparently starts and proceeds as soon as the birds are fledged ; youngsters have been caught and ringed and recaptured several miles away during the same month. That they do not always nor even usually leave the district in which they were hatched is manifest, and out of thirty recoveries ten were made in the same district in the ensuing winter, and others in later summers and winters. The statement in the *Practical Handbook* that “ many home-bred birds emigrate September and return March ” is certainly not borne out by these records.

TABLE (II). MARKED AS ADULTS IN SUMMER.

With the one exception of a bird found forty miles distant all recoveries in this group were made in the place where they were originally captured.

It is easy to draw a false conclusion from this. We have seen that nestlings disperse to some extent when fledged, and anyone who has noticed the local increases and movements which are still going on in May cannot doubt that some movement, however local, of the adult nesting birds takes place.

From the analysis, however, it is clear that a good proportion of the nesting adults do not leave the neighbourhood of their summer quarters, but stay there throughout the winter.

TABLE (III). MARKED AS ADULTS IN WINTER.

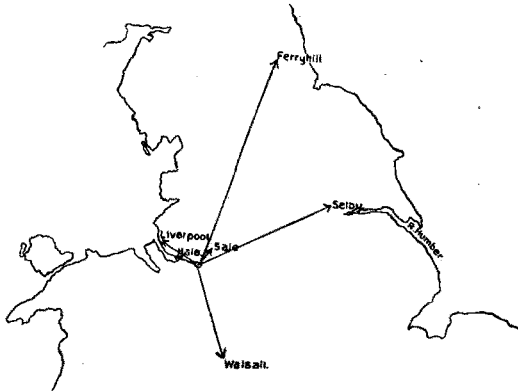
Trapping has been practised far more diligently in winter than in summer and an undue number of recoveries have therefore been made in the winter season, but I have in Cheshire continued to trap throughout the year, using in summer no traps of the automatic type but only those that may be closed by the ringer at will (thus avoiding the possibility of keeping nesting birds from their nests for more than a couple of minutes), and one or two other ringers have retrapped a few in May and June.

If this had not been done the recoveries in this table must have given a totally false estimate of the birds' distribution subsequently, and particularly in the summer months.

Birds recorded in this table were marked mainly in about six centres : over 80 individual birds in a trapping station in

Cheshire, 19 at the Oxford Trapping Station, and smaller numbers in Northumberland, Durham, Surrey, Wiltshire, Devon and various scattered localities.

.Of all these marked in winter only six were found at any distance from the place of marking (iii) (B)—3 in summer 11 to 21 miles distant; 1 in less than a month in early spring 55 miles to the S.E., and 2 in the next winter 70 and 107 miles to the N.E. No other bird has been recovered more than 4 miles from its place of marking.



Sketch Map to illustrate movements of Greenfinches marked as adults. (See Table iii, B.)

It will be noted (iii) (A) that a considerable number was recaptured in the first summer after trapping (this number, it is true, includes some birds marked in March and recaptured in April), and though even more were recorded in the next winter, that is no doubt partly accounted for by their greater readiness to enter traps in cold weather.

All this points to the probability that our wintering Greenfinches are largely part of a sedentary resident bird population, but records other than those of marked birds must be taken into consideration. Greenfinches have long been shown to be immigrants to our islands, and in the *Practical Handbook* these movements are concisely given. In the *Reports on the Migration of Birds (1879-1887)* by Messrs. J. A. Harvie-Brown, W. Eagle Clarke, etc., are many records of their arrival on the east coasts of Scotland and England, and at the lighthouses, mainly in October, and some throughout the winter months. In his *Studies in Bird*

Migration (1912) Eagle Clarke gives as their usual date of arrival from October 13th to November 26th (Vol. I., p. 158) and suggests (p. 51) Scandinavia and north Russia as probable summer haunts; he also details immigrations to various islands. From Gaetke's *Heligoland* we learn that in that island they migrate principally in December, January, and February, and appear in great numbers after heavy snowfall or frost on the Continent—as if unwilling to leave their homes until forced to do so. Riviere, in his recently published *History of the Birds of Norfolk*, states that considerable numbers arrive on the coast in autumn, chiefly in October, and that many of these pass along the coast-line to the south.

It would appear that few of these immigrants have been trapped and marked, and the capture of a number on the coast of Norfolk or Lincolnshire would no doubt give valuable results, and show among other things whether these immigrants winter in our islands or are merely birds of passage.

In Cheshire at least there is very considerable movement during the winter months; Greenfinches form part of wandering hordes of small birds scattered in flocks over the countryside, and trapping confirms this; throughout December and the first five months of the year fresh birds continue to enter the traps and to pass on, and it is possible to catch in one spot perhaps a couple of hundred in two or three months and still to have fresh ones arriving daily.

Yet it seems proved from our records that this wandering is largely local and rarely extends for more than a few miles; two alone of Table (iii) (B) can possibly have been birds intending to leave the country, and probably such a guess draws a wrong conclusion.

Proof seems definite enough that some, at least, never leave their native place at all. One example in particular calls for special notice:—

D3233, ringed in Cheshire in November, 1925, was recaptured in January, May and December, 1926; January, May, November and December, 1927, and in February, May, June and December, 1928. Another was recaptured nine times during three consecutive winters.

On the other hand, I have noted on a number of occasions their recapture on almost exactly the same day a year or more later, though not on any intermediate date. Thus:—

A9343, first caught Cheshire, February 24th, 1924; recaptured February 22nd, 1926, and February 21st, 1929, and on no intermediate dates.

B9164, first caught Cheshire, March 9th, 1925; recaptured March 8th, 1927, and on no intermediate dates and there are several other cases from Branscombe, Devon and Malvern of their recapture almost exactly twelve months later.

It may be that these wandering flocks tend to visit certain feeding-grounds as conditions prove suitable, and that this occurs much at the same date each year.

Investigation of these problems would be made much easier by the setting up of more trapping stations; in these there would be a good chance of catching birds marked at other stations, and at least of getting additional evidence of local movements in this country.

CONCLUSION.

From these tables, then, we come to the conclusion that our Greenfinches are largely a sedentary race, scattering over a very limited area after breeding, and that there is also slight evidence (based on three records only) of a tendency to move south in winter.

Much more trapping of adults in winter is, however, necessary in order to increase our knowledge of the movements of autumn and winter immigrants after they reach our shores.

ASSOCIATION WITH ONE ANOTHER.

Another fact these records show is that to some extent Greenfinches join the same flock or can be found in the same company after the lapse of a year.

For example, two marked on the same day—December 23rd, 1928, were recaptured on the same day—January 12th, 1930; it is not certain that they kept together throughout the period as only one of them was caught (in January and May, 1929) during the intermediate months. Two others caught on March 3rd, 1925, were recaptured on January 13th and 14th, 1926, but never between those dates.

Careful note should be taken of the ring-numbers of birds actually caught together, and this has not yet been done regularly enough to show any definite result.

That the flocks break up and scatter can also be shown from these two records:—

B9134, Cheshire, marked March 3rd, 1925; recaptured December 16th, 1925, 4 miles to E.

B9136, Cheshire, marked March 3rd, 1925; recaptured December 5th, 1925, 70 miles to N.E.

where the near coincidence of the dates of recovery is noteworthy.

AGE.

Ringling will ultimately give an idea of the ages birds attain, and already some data on this have been published (cf. *antea*, Vol. XX., pp. 71-73). Tables (i), (ii) and (iii) show that a fair number of Greenfinches survive at least three years, and the greatest age so far recorded is that of a bird marked in Cheshire, February 24th, 1924, which was still alive on February 21st, 1929. At the latest it will have been hatched by August, 1923, and must have been at least $5\frac{1}{2}$ years old when last seen.

HOMING.

Anyone who has trapped birds to any extent will have been troubled by certain individuals of several species which continually visit the traps. The Oxford Trapping Station put such Greenfinches to good use by conducting a series of experiments on their ability to return to these traps from a distance (*antea*, Vol. XXI., pp. 292-293). Five birds were used, and three of them were released at varying distances on different days and from different directions. One of them was released no less than five times, and in each case was retrapped very soon, though on the two last occasions it had been released $6\frac{1}{2}$ miles N.W. and $6\frac{1}{2}$ miles S.W. of its place of capture. Another bird returned from distances 4 miles W., $6\frac{1}{2}$ miles N.E. and 9 miles E., and in the first and last cases was recaptured on the day following its release. It is perhaps significant that one released 13 miles distant was not retrapped.

Another interesting experiment was carried out by Mr. P. E. A. Morshead at Branscombe, Devon, on December 23rd, 1930. He caught forty Greenfinches, and lacking rings enough to mark them all, took them to his home three miles over the hills and released them at 11 p.m. in his garden, where they at once roosted in the bushes and ivy. At noon on the following day he retrapped four of them in the farmyard in which he had first caught them, though there was a very suitable farmyard within twenty yards of their enforced roosting-place.

These two experiments, as Messrs. Nicholson and Willson point out, show that Greenfinches possess either an accurate knowledge of a great area of the countryside or a wonderful homing sense. That they possess the former is indeed probable; the tables drawn out above prove that the species is undoubtedly sedentary to a great extent within a radius of 5 to 10 miles, and obviously their wandering habits in this area must make a great part of it familiar to them.