

Leg colour would appear to be most useful as an ageing character when taken in conjunction with wing plumage. A bird with 'adult' inner median coverts caught between August and April is probably second year if the legs are other than orange. Orange-legged birds might include a few second year individuals later in winter, but are most likely to be over two years old.

Female Ruff are many times more numerous on East African wintering grounds than males, and have accounted for 93% of the birds caught at Nakuru. As far as can be gathered from the rather small sample examined, males undergo a similar leg colour change to females, but more frequently seem to have acquired mottled or brownish legs by their first autumn.

The age proportions of Ruff wintering in Kenya appear to be very different than in South Africa. Of birds caught at Nakuru over the past two years, 18.4% have been first year, 17.5% non orange-legged adults and 64.1% orange-legged adults, most presumably in their third year or older. First year birds are rarely retrapped, and have shown little tendency to return to the area in successive years. Twelve of the 282 'adult' birds ringed in 1970/71 were retrapped the following season (four of these had yet to acquire orange legs when first handled), but not one of the 86 first winter birds. The indications are that Ruff wander more and tend to migrate further south in their first year than subsequently. From their second year, many birds apparently return to the same wintering grounds.

Most Ruff recorded in Britain are juvenile autumn passage migrants with green legs. Leg colour observations from regular British wintering grounds or indeed from European breeding grounds would obviously be of interest.

SOME RESULTS FROM RINGING DUNLIN ON THE DEE ESTUARY IN AUTUMN

by R.A. Eades

Some details of the Merseyside Ringing Group's results from ringing Dunlin on the Dee Estuary in May were given in a previous bulletin, and I should now like to look at the results from ringing Dunlin on the Dee in "Autumn", that is, in the months July, August and September, again using the data of the Merseyside Ringing Group.

The M.R.G. first started to ring Dunlin on the Dee in 1958 at Shotton Pools, Flintshire. These fresh water pools lie behind the sea wall in an area of pasture used for grazing cattle. (They were, and still are, strictly private). Cows were allowed access to the water to drink, keeping the vegetation low and the pools muddy. The habitat was very attractive to wading birds of most species, including Stints, Spotted Redshank, Greenshank, Ruff, etc. and a hundred or so Dunlin were often present in Autumn. The M.R.G. had considerable success in catching waders there, using mist-nets at night time in the new moon period. The birds flew onto the fresh pools as the tide covered the open estuary, and good numbers were caught. Between 1958 and 1964, the M.R.G. ringed 798 Dunlin at Shotton in July, August and September, the peak month being August.

In 1963 the local farmer decided to prevent his cows drinking at the pools, to prevent accidents and disease, and fenced the pools off from the pasture. A dramatic decline in the habitat then took place. Within twelve months a thick growth of Juncus reeds covered the mud, and the area lost its attraction to most waders, including Dunlin.

The M.R.G. then started to ring waders on the tidal area of the open estuary, mainly at the Point of Air, Flintshire and West Kirby, Cheshire, again using mist nets over the new moon period. Between 1964 and September 1970, a further 1895 were ringed in "Autumn" on the open shore, making a total of 2693 ringed in Autumn between 1958 and 1970. It is very interesting to see that there is a great difference in recovery pattern between the Dunlin ringed at Shotton Pools, and those ringed later on the tidal estuary. This difference was first noted by Follows (1965).

RECOVERIES OF 798 DUNLIN RINGED AT SHOTTON POOLS

<u>Place of Recovery</u>	<u>Month of Recovery</u>												
	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
Dee	1	-	-	-	1	-	1	-	-	-	-	-	3
S.W. France	-	-	-	7	5	-	-	1	-	-	1	-	14
North France	-	-	-	1	-	-	-	-	-	1	-	-	2
Ottenby, Sweden	-	-	-	-	-	-	-	1	-	-	-	-	1
Total	1			8	6		1	2		1	1		20

The Shotton Dunlin had a very high rate of foreign recovery, i.e. seventeen out of 798. It can be seen that there is a heavy bias towards Spring recoveries in France; especially in the Gironde and Les Landes area. These birds were all shot. Follows postulated that this recovery pattern was caused by these Dunlin appearing in France only as spring and autumn passage migrants, and wintering further south. It seems very probable that Dunlin migrating through France in April would be the same birds as appear on the Dee in May (see previous bulletin), and the recovery of a Shotton ringed Dunlin in May on Hilbre Island (in the Dee estuary) lends support to this theory.

The possible breeding area for this group of Dunlin is indicated by the control at Shotton on 23 August 1959 of a bird ringed in Iceland four weeks earlier. A bird ringed at Chew Valley, Somerset, (also a fresh water site) in September 1961 was controlled in August 1962.

A recovery at Ottenby, and a bird found dead on the Dee in mid-winter, show that some of the wintering "Northern" population were also present, but it seems that migratory Dunlin from at least Iceland (and possibly Greenland) formed the majority of those ringed at Shotton Pools.

Recoveries of Dunlin Ringed on the Tidal Estuary in Autumn

Since autumn ringing shifted to the open shore, 1895 Dunlin have been ringed, but with different results. Not one has been recovered away from the Dee, forty one have been caught again on the Dee, many have been in wing moult when caught (Okill 1970), and in July almost all have been adults (compared with 30% juveniles at Shotton in July).

Local Recoveries

Fifteen have been caught again in "autumn"

	<u>Same Roost</u>	<u>Different Roost</u>	<u>Total</u>
Same Autumn	3	4	7
One autumn later	4	1	5
Two autumns later	1	1	2
Three autumns later	0	1	1
	<u>8</u>	<u>7</u>	<u>15</u>

Twenty one ringed in July, August and September have been subsequently caught again in the October to April period.

	<u>Same Roost</u>	<u>Different Roost</u>	<u>Total</u>
Winter following ringing	5	1	6
One winter later	3	4	7
Two winters later	0	1	1
Three winters later	1	1	2
Four winters later	1	1	2
Five winters later	3	0	3
	<u>13</u>	<u>8</u>	<u>21</u>

and five have been controlled in May. Out of 1895 ringed, only four have been caught with non-Dee rings.

<u>Where Ringed</u>	<u>When Ringed</u>			
	<u>May</u>	<u>July</u>	<u>August</u>	<u>September</u>
Skonor, Sweden	-	1	-	-
Ottenby, Sweden	-	-	-	1
Isle of Man	-	-	1	-
Fair Isle	1	-	-	-

Thus, the pattern of recoveries indicates that in autumn some segregation takes place, with Icelandic migrants preferring parts of the estuary which are not used by Dunlin in the winter time, e.g. fresh water marshes, whilst the Dunlin on the tidal estuary at this time are mainly birds arriving on their wintering grounds.

This difference in recovery pattern has probably been exaggerated by human activities. Unfortunately, in no year has it been possible to directly compare samples from fresh water with sample from tidal habitat, but, undoubtedly, some "Northern" birds were present at Shotton, and similarly, Okill (1970 and pers. comm.) has demonstrated that migratory races of Dunlin do occur in catches of Dunlin on the open shore. By measuring wing and bill length, and checking for moult, Okill has shown that adult Dunlin ringed in autumn on the open shore fall into two groups. One group have long bills and are in moult, these birds will probably winter on the Dee. The other group have shorter bills and are not in moult, they are not found later in the year, and are presumably migrants which moult later.

Thus, the division between fresh water Dunlin and tidal Dunlin is probably not as clear cut as the recoveries suggest, and has probably been exaggerated by hunting activities. Although the crop of spring recoveries in France stopped with the end of ringing on fresh water, it seems possible that there has been a change in shooting habits in Southwest France, and that spring shooting no longer takes place. This is probably due to stricter enforcement of bird protection laws, for the fifteen birds reported shot in April and May were in fact all killed "out of season" as the French shooting season for shore birds finishes in March. (Redde pers. comm.). However, autumn shooting still takes place, but there have been no autumn recoveries in France since 1964.

The important part which cows play in keeping a habitat suitable for waders is perhaps not widely realised. However, their role cannot be over emphasised, and one hopes that persons responsible for maintaining reserves are aware of this.

If migratory Dunlin do segregate to freshwater then this has implications for all wader ringers. With the arrival of cannon nets, there is perhaps a tendency for ringers not to bother mistnetting small numbers of Dunlin at sites like sewage farms, pools behind sea walls, fresh water marshes etc. when many more can be caught at nearby beaches with cannon nets. However, if the experiences of the Merseyside Ringing Group are a true indicator, small catches at such sites can be very valuable indeed.

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References

- Follows "A summary of Dunlin recoveries and controls" M.T.G. Report for 1965.
Okill "Stages of Wader Moult". M.R.G. Report, for 1970.