

# The migrations of European Redshank and Dunlin

M. A. Ogilvie

## Summary

A REVIEW of published recoveries of birds ringed in all European countries, supplemented by unpublished British material. The picture of Redshank movement remains similar to that given by Salomonsen (1954), though interpreted rather differently. Redshank from Scandinavia and north-west Russia migrate along the western coasts of Europe into Iberia, wintering around the Mediterranean and in west Africa. Birds ringed in summer in Finland and on passage in southern Sweden include more visitors to west Africa than Danish-ringed birds, more of which stay on the north shore of the Mediterranean. Very few continental Redshank visit Britain. Many from Iceland winter on both the east and west sides of the British Isles, few reaching the Continent. Much of the British-bred stock emigrates to western Europe, south to Portugal. Individuals wintering in Britain move little during the winter.

Very few Dunlin have been ringed or recovered in the breeding season. Many passage-migrants ringed in Norway visit Britain, others going into south-west Europe. Most Swedish-ringed Dunlin winter in the Mediterranean area. Though some reach north Africa their winter range does not extend as far south as that of the Redshank. The preponderance of Norwegian-ringed birds in Britain is probably due to a large northern Scandinavian element, Swedish passage-migrants including relatively more Siberian birds. Late summer ringing in Britain shows that some early immigrants move on south-westwards, though many remain, together with birds from Iceland. British-bred Dunlin show southward movement within the country in autumn and winter, though none have yet been recovered abroad. A late spring passage in western France probably consists of British and Icelandic, rather than Scandinavian, stock.

## Introduction

Both the Redshank *Tringa totanus* (L.) and the Dunlin *Calidris alpina* (L.) have been the subject of detailed migration studies based in the main on ringing recoveries (Salomonsen, 1954; Nørrevang, 1955). With the great increase in wader ringing in Britain in recent years there has arisen a need for our knowledge of wader migration to be brought up-to-date, with particular reference to the new light now being thrown on those parts of the European populations breeding in or visiting Britain.

The sources used are all published recovery lists of European ringing schemes since 1948, and all British recoveries since 1945. Both Salomonsen and Nørrevang made use of all available recoveries up to 1954. There is thus some overlap in each case, but much of the material analysed here is new, and no pre-war material used in the two previous studies has been incorporated.

I am indebted to Mr. Robert Spencer, Ringing Officer, and the Bird Ringing Committee of the British Trust for Ornithology for permission to use, and facilities in obtaining, the full details of British ringing recoveries.

## Redshank

### *Results from Scandinavian ringing*

Salomonsen (1954) found that Redshank ringed in Denmark, nearly all of them on autumn passage at Amager, near Copenhagen, wintered on the Mediterranean coasts of Spain, France and Italy. He suggested that most of these birds travelled on a trans-continental route direct from Denmark and recoveries on the west coast of France indicated a much smaller number of birds using a path down the western sea-board of Europe. His evidence for the direct route consisted of two recoveries from the interior of southern France together with observations of Redshank passage across France and Switzerland.

**Table I.** Distribution of recoveries of Redshank ringed in Denmark

Area Recovered	Month of recovery												Total
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
Denmark .. .. .		1				1			1	1			4
England .. .. .								2					2
Holland .. .. .							1			1	1		3
N. France .. .. .	1	6			1		2	1					11
W. France .. .. .	1	8	7	2		1		1	2	4	1		27
Cent. France .. ..							1			1			2
S. France .. .. .		18	7	5	5	4	2	6	4		1	1	53
Italy .. .. .		15	9	3	3	2	2	6	3	1			44
East Spain .. .. .		3		2	5	2	3	1					16
Portugal & West Spain			6	1	4	3	3	3	1				21
N.W. Africa .. ..						1	1	1					3
Total	2	51	29	13	18	14	15	21	11	8	3	1	186

It is equally plausible, however, to suggest that the coastal route is the main one. Table I, which though it contains 186 recoveries instead of 154 available to Salomonsen differs little in proportion from that published by him, displays the recoveries of Danish-ringed Redshank arranged by month and area of recovery. Though the total number of recoveries has been increased, no more have occurred in central France since 1953. Inspection of the autumn recoveries on the coastal route indicates that the majority of birds could well pass south from Denmark this way, crossing from the Atlantic coast of France to the Mediterranean coast just north of the Pyrenees. Further evidence of the use of this route is given by the smaller number of recoveries of Redshank that have kept to the Atlantic coast and reached Portugal and north-west Africa.

In Sweden, Redshank are ringed on autumn passage at Ottenby on the southern tip of the Baltic island of Öland. The recoveries are shown in Table II. The use of a coastal migration route is clearly indicated, with few birds deviating from the west coasts of France and the Iberian Peninsula. A complete lack of recoveries in December and January suggests a wintering place beyond Europe. This is partially confirmed by the few recoveries on the west coast of Africa as far south as Sierra Leone, within 9° of the Equator. The true extent of the wintering haunts of the Swedish-ringed Redshank remains unknown with the usual paucity of recoveries from this continent of people backward at least in the matter of returning rings.

**Table II.** Distribution of recoveries of Redshank ringed in Sweden

Area Recovered	Month of recovery												Total
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
Sweden .. .. .		1										1	2
Germany .. .. .	1												1
N. France .. .. .	1	9	1	1				1		1			14
W. France .. .. .	2	23	5	2					2	4	16		54
Cent. France .. ..		1											1
S. France .. .. .	2	1	2	1						1	1		8
Italy .. .. .		2		1						1			4
Portugal & West Spain		4	6	1	2								13
N.W. Africa .. ..				1						1	1		3
Tropical W. Africa ..			1		1								2
Total	6	41	15	7	3			1	2	8	18	1	102

Salomonsen indicated that the route followed by the Swedish Redshank from Ottenby to northern France took them directly across that of the Danish birds on the trans-continental path to the Mediterranean. The evidence is certainly there, however, to suggest that the two streams of birds follow the same line out of the Baltic, west and south along the coasts of Holland and France. The divergence to the separate wintering areas does not occur before south-west France is reached.

The two populations of Redshank travel south at much the same time, the recoveries in Portugal and west Spain showing this very clearly, with the main arrival in the area in September. The Danish-ringed birds stay and the Swedish-ringed ones continue their journey. This is shown equally well by the recoveries on the Mediterranean coast. Very few Swedish-ringed birds reach this region, but those that do are nearly all on autumn passage and the absence of any winter recoveries of these birds in the area indicates that they similarly pass on south.

While the timing of the autumn passage is much the same for the two populations, in the spring there is a considerable difference. The recoveries of Danish-ringed Redshank in the period March to May show that they leave the Mediterranean coasts in late March and then make the return passage during April, following the coastal route northward. The Swedish-ringed birds hardly reappear in Europe until April and the main passage on the west coast of France does not occur until the end of the month and during the first two weeks of May; of 28 recoveries in the spring, 23 are in the period 18th April to 13th May.

New results since 1954 have come from ringing, mostly during the breeding season, in Finland. The recoveries of these birds, though only totalling 19, show a coastal route and southern wintering area similar to that of Swedish-ringed birds. Despite the lack of recoveries to the north it might be supposed from its geographical position that many of the Redshank passing through Ottenby have come from Finland. However, the Finnish-bred birds follow a path to the north of the island, crossing central Sweden to Denmark before turning south to join the coastal route. The Redshank ringed in Norway also pass through Denmark. 11 recoveries reveal a pattern similar to the Swedish- and Finnish-ringed birds. One bird from Norway and one from Finland have reached tropical West Africa.

The picture that emerges from the Scandinavian ringing is of the populations breeding in the north of the area migrating to winter quarters well to the south of those taken up by birds presumably breeding in a more southerly area: a very clear illustration of 'leap-frog' migration (Salomonsen, 1953, 1955). The absence of any recoveries of Scandinavian-ringed Redshank from western Russia, and eastern Europe, is remarkable, since the breeding birds of these regions seem not to be morphologically distinguishable. Presumably they have separate, more easterly winter quarters too.

A very few recoveries are available from the ringing of Redshank in other European countries, mostly in Holland and Germany, but these are not sufficient to show clearly where their winter quarters are situated. The route followed by these birds is again the coastal one, with the Iberian Peninsula the likely destination.

There have only been four recoveries in England of Redshank ringed in Europe, all four being in East Anglia. One of these was ringed in west France

in March and recovered in May, almost certainly belonging to the British population. The other three were all bred on the Continent and recovered in autumn or winter.

### *Results from British ringing*

There has been a considerable increase in the ringing of Redshank in Britain in recent years, the total marked having doubled since 1954 and having reached 7267 by the end of 1961. Much of this increase has come from the introduction of new techniques for catching birds capable of flight, while the number of pulli ringed has grown only slightly in the same period. There have been 105 recoveries of Redshank ringed in Britain between 1945 and 1962. 46 of these are assumed to belong to the native breeding population, having been ringed either as pulli, or as full-grown birds between 1st May and 15th July. While it is certain that British Redshank occupy breeding territory before and after these dates, particularly in the south of the country, birds still moving north to Scotland and Iceland in late spring, and early return passage, restrict considerably the period within which the great majority of birds ringed can safely be said to have been caught on their breeding grounds.

**Table III.** Recoveries of Redshank ringed in Britain, grouped by date of ringing

	May-July 15th	July 16-31st	Aug/Sept/Oct	Nov/Dec/Jan/Feb	Mar/Apr	Total
Iceland .. .. .		1				1
Britain 100+ miles N .. ..		4				4
" 10-100 m. N .. ..	2	5		1		8
" Local .. .. .	11	21		3	5	40
" 10-100 m. S .. ..	12	2			1	15
" 100+ m. S. .. ..	5	1				6
W. Europe .. .. .	13	4				17
	43	38		4	6	91

Table III sets out the recoveries by period or month of ringing against distance and direction, or country, of recovery. Table IV uses the same recoveries but shown by period of recovery and also differentiating between birds ringed during the breeding season and outside it. 14 recoveries of Redshank found less than one month after ringing and within ten miles of the ringing place are omitted. Distinction is made between birds that have moved in a southerly direction from the ringing place and those that have moved to the north.

**Table IV.** Recoveries of Redshank ringed in Britain, grouped by date of recovery

	May/June/July	Aug/Sept/Oct	Nov/Dec/Jan/Feb	Mar/Apr	Total
Iceland .. .. .				1	1
Britain 100+ miles N .. ..			1	3	4
" 10-100 m. N .. ..	<i>1</i>	<i>3</i>	<i>2</i>	<i>2</i>	8
" Local .. .. .	5	21	1	2	40
" 10-100 m. S .. ..	2	7	1	2	15
" 100+ m. S. .. ..	1	4			6
W. Europe .. .. .	5	5		3	17
	13	19	4	7	91

Numbers in roman are of birds ringed in the breeding season;  
in italic of those ringed outside the breeding season.

Our native population of Redshank mostly leave their breeding areas by the end of July and move south in Britain, some reaching the western coast of Europe as far as Portugal. All but 6 of the birds ringed in the breeding season, and subsequently recovered, were pulli and there are recoveries of these from France by the middle of July in the summer of ringing, indicating a very early start to the autumn emigration. The 6 recoveries of breeding adults give little indication of timing but show that they too leave their summer quarters and move south.

Ringling outside the breeding season, mostly in August and September, reveals that having taken up their winter quarters the Redshank tend to stay until the following spring. Recoveries of winter-ringed birds have been made in spring and summer well to the north of the ringing place, including one in Iceland which adds to the evidence that the British Isles form the main wintering quarters for the Icelandic Redshank population.

#### Ringling in Iceland

A limited amount of summer ringling in Iceland before and since the second World War has produced 8 recoveries between July and April in the British Isles and a single winter recovery in Holland.

Iceland Redshank *T. totanus robusta* (Schj  ler) have been identified on the west coast of continental Europe where they probably occur regularly in small numbers. The main wintering area of *robusta* is, however, on the east and west coasts of Britain and Ireland.

### Dunlin

#### Results from Scandinavian ringling

Large scale ringling of Dunlin in Norway and Sweden since the War has produced sufficient recoveries in autumn and winter for useful comparisons to be made, while not providing more than a few records in spring and summer.

Tables V and VI set out the recoveries of Dunlin ringed in Norway (273) and Sweden (361) respectively, by date and place of recovery. The bulk of the ringling in Norway was carried out in the south at Revtingen, and in Sweden at Ottenby on the island of   land. Comparisons between the two tables show an autumn passage through Denmark by both streams of birds continuing down the west coast of Europe with a strong branch into the British Isles.

Table V. Distribution of recoveries of Dunlin ringed in Norway

Recovered	Aug.	Sept.	Oct.	Period of Recovery		June	July	Total
				Nov. to Feb.	Mar. to May			
Russia .. .. .	2	2			1	3		8
Scandinavia .. .. .	3		1		1		11	16
Denmark .. .. .	10	14	14	5	2	2	1	48
Germany .. .. .		1	3	5	2			11
Holland .. .. .		1	2	3	1			7
British Isles .. .. .	5	10	10	41	1			67
N. and W. France .. .. .	3	8	11	56	20		1	99
S. France .. .. .				2				2
Portugal & West Spain .. .. .				6	1	1		8
Italy .. .. .					3			3
N.W. Africa .. .. .			1	3				4
Total	23	36	42	121	32	6	13	273

**Table VI.** Distribution of recoveries of Dunlin ringed in Sweden

Recovered	Period of Recovery							Total
	Aug.	Sept.	Oct.	Nov. to Feb.	Mar. to May	June	July	
Russia .. .. .	3	1	1	1	4	3		13
Scandinavia .. ..	2	1					2	5
Denmark .. .. .	12	17	11	5				45
Germany .. .. .	2	7	3	7	6		1	26
Holland .. .. .		2		6	6	1		15
British Isles .. ..	11	1	6	35	3			56
N. and W. France ..		8	5	95	30			138
S. France .. .. .		1	3	6	2			12
Italy & Greece .. ..		1	1	16	5			23
E. Spain .. .. .				2				2
Portugal & West Spain		1	1	16	4		1	23
N.W. Africa .. ..			1	2				3
Total	30	40	32	191	60	4	4	361

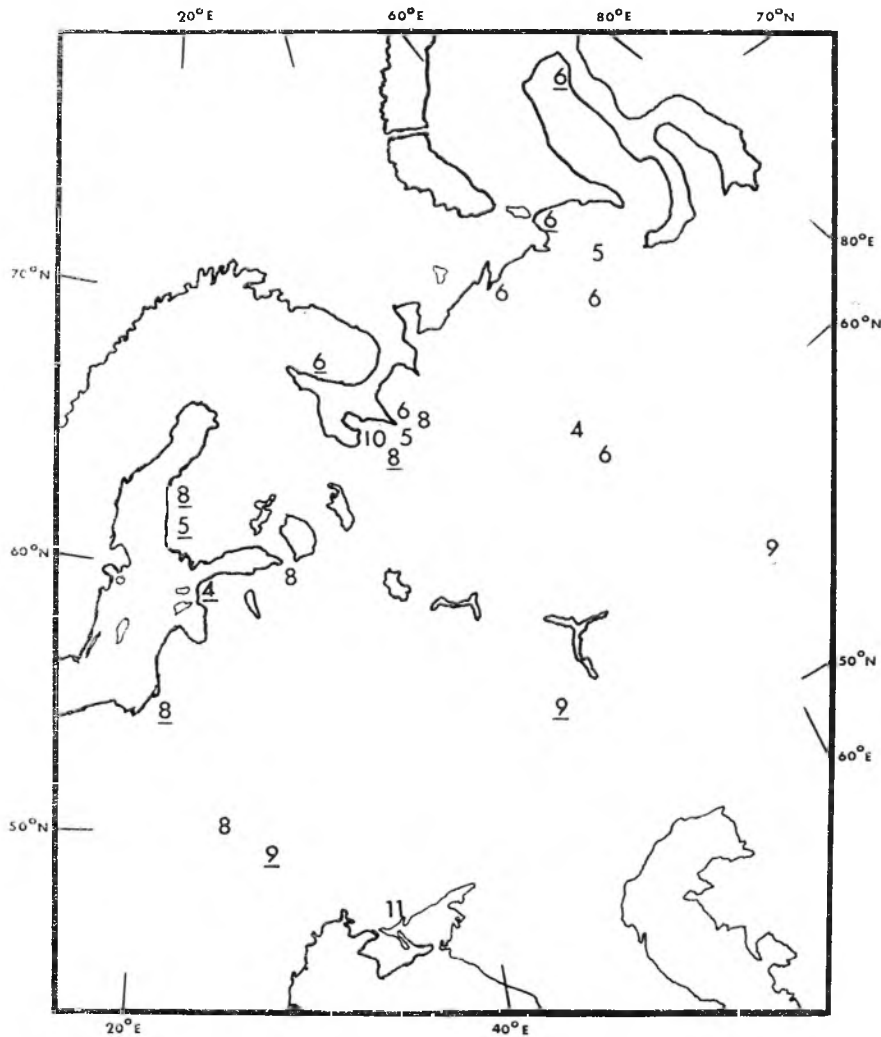
The wintering areas for the two groups overlap to a considerable extent, with the main headquarters of both on the north and west coasts of France. There is a tendency for the Norwegian-ringed Dunlin to winter further west with a higher proportion of recoveries in Britain and very few reports from the Mediterranean area, used extensively by Dunlin ringed in Sweden. A few birds winter as far north as the North Sea coasts of Germany and Holland, and some from each ringing place travel to the west coast of North Africa, but the numbers involved are probably small. (Whereas Redshank occur in winter down the entire west coast of Africa, Dunlin are not often reported south of 30°N.).

Table VII shows the dates of ringing of Dunlin at Revtingen and Ottenby. Migrants in July are caught only at Ottenby, and in October more birds are taken at Revtingen than Ottenby. Despite these differences, the timing of the onward autumn migration as shown by recoveries is surprisingly similar, even allowing for the simultaneous effect on both groups of the onset of the shooting season. It suggests a possible pause in the migration of the birds passing through Ottenby in July, perhaps in the west Baltic or Denmark area. It will be seen later that these early migrants are virtually all adults. It would seem likely that the supposed pause is for the purposes of moult, though the Wash Wader Ringing Group has found that many adult Dunlin arrive in Britain from Scandinavia before moulting.

**Table VII.** Recoveries of Dunlin ringed at Revtingen, Norway and Ottenby, Sweden, grouped by month of ringing

Place ringed	Month of Ringing					Total
	June	July	Aug.	Sept.	Oct.	
Revtingen, Norway ..			54	174	38	266
Ottenby, Sweden .. ..	6	100	115	128	7	356

The return passage in spring shows few differences and the distribution of summer recoveries (see Map I), though suggesting a preponderance of Swedish-ringed birds north and east in the U.S.S.R., is based on too few records to establish a difference. Also on the map are three Dunlin ringed in Scandinavia one autumn and recovered in southern Russia in subsequent years, also in autumn. There is a possible indication here of a migratory divide in Arctic Russia, with the west part travelling to Europe and the easterly moving south



Summer and Autumn recoveries in Russia and Finland of Dunlin ringed at  
 Ottenby, Sweden 0  
 Revtangen, Norway 0

to the Black Sea or eastern Mediterranean; similar examples of individuals following different migration routes in different years occur in a number of other northern breeding species.

The difference in timing of ringing at Revtangen and Ottenby indicates that juveniles, rather than adults, use the more northerly route across Sweden into southern Norway. Unfortunately, accurate ageing has not been carried out at Revtangen and other evidence must be found. At Ottenby, the migrants occurring in late July and early August, are nearly all adults (Nørrevang, 1955). Martin-Löf (1958) found that by the end of August juveniles predominated, and continued to do so throughout September. With the peak movements at Revtangen in September, it is reasonable to suppose that they consist mostly of juveniles.

Nørrevang (*loc. cit.*) suggested that a regular migration at Revtangen would not be expected, presumably because of its geographical position. He put forward two suggestions to explain why a strong migration actually took place: 1) that the southward movement from northern Scandinavia passed through southern Norway; and 2) that a regular, yet abnormal, deviation from the usual migratory path was made by a certain proportion of the juveniles moving west in the Baltic. Nørrevang preferred the second explanation and put forward the possibility of drifting before the wind as the likely cause. This still left unexplained the difference in wintering areas used by the birds, supposedly of common origin but, due to weather conditions, ringed at different places. Nørrevang suggested that many of the juveniles, having reached Revtangen under influence of the wind, then resumed their standard migration direction and reached areas more to the west of those birds moving normally through Ottenby.

There is the usual lack of recoveries from northern Scandinavia, a gap common to many species and due to the legal protection afforded them. This is no reason to reject the probability that the Dunlin breeding in this area migrate south through southern Norway, and that these birds ringed at Revtangen provide the most westerly element in the wintering areas used, with the rest of the Dunlin passing through there being just a part of the westerly stream of juveniles leaving their breeding-grounds in Russia. A divergence of routes across southern Scandinavia is found in other wader species, including Redshank, and seems a more likely and simple explanation than drifting of Dunlin from the Baltic, clear across Sweden to the Kattegat, taking place each year over a period of five or six weeks.

As would be expected the Dunlin ringed in Denmark at Amager, near Copenhagen, use migration routes and wintering areas that show little differentiation from those of the Norwegian- and Swedish-ringed birds combined. There are 85 recoveries only, but the proportion in Britain compares well with that of birds ringed in Norway, and a number on the Mediterranean shores of Spain, France and Italy share a common wintering area with many of the Dunlin ringed in Sweden.

A small amount of ringing in Finland in recent years has produced 19 recoveries which show an autumn migration through Sweden and Denmark to Britain and France. Even fewer recoveries from ringing in Germany, Holland and Belgium since the war do nothing to alter the picture given by the Scandinavian ringing.

#### *Results of British ringing*

The ringing of Dunlin in Britain has increased tenfold in the last four years. At the end of 1961, over 12,500 had been ringed compared with 1300 to the end of 1957. It follows that the 172 recoveries notified by 31st December, 1962, do not fully represent the results of this very recent growth in ringing. They do, nonetheless, give a reasonable picture of migration and distribution, and also present an opportunity for making some deductions that may or may not be borne out by subsequent recoveries.

Of the 172 recoveries, 76 were reported abroad. These are set out in Table VIII by date and place of recovery. Over three-quarters of them were ringed in August and September, caught whilst on passage through Britain. Some of the autumn-ringed birds and most of those ringed in the winter



months remain here until the following spring. The Dunlin that move on to winter on the Atlantic coasts of Europe and North Africa provide a close comparison with the winter distribution of Dunlin ringed in Norway. This confirms that birds ringed in Norway come to Britain in the autumn, but suggests that a considerable number pass through the country and on into south-west Europe. The lack of recoveries in the Mediterranean from British-ringed birds indicates that while many Dunlin ringed in Sweden winter here, they do not visit the British Isles on passage.

**Table VIII.** Distribution of recoveries of Dunlin ringed in the British Isles

Area recovered	Period of Recovery										Total
	Aug.	Sept.	Oct.	Nov. to Feb.	Mar.	Apr.	May	June	July		
Iceland .. .. .								1		1	
Russia .. .. .	2									2	
Scandinavia .. .. .	1								2	3	
Denmark .. .. .	6	1		1						8	
Germany & Holland .. .. .	1					1		1		3	
Britain Local .. .. .	15	1	7	29	2	4	1	5	4	68	
" 10-100 miles .. .. .	6	2	2	2			1			13	
" over 100 miles .. .. .	2	1	1	7	1	1			1	14	
N. France .. .. .	3	1	1	1	1	1	2		1	11	
W. France .. .. .		7	2	1	4	10	11			35	
Portugal & W. Spain .. .. .		1		5			1			7	
N.W. Africa .. .. .		1		4			1			6	
Total	36	16	13	50	8	17	17	7	8	171	

There is an interesting group of foreign recoveries in April and May, mostly on the west coast of France. There is no comparable movement as late as this by the Dunlin ringed in Scandinavia, suggesting that these birds belong to a different population, presumably that breeding in the British Isles and Iceland. Though no British-bred Dunlin has been recovered abroad, evidence to support this hypothesis comes from three birds ringed on the breeding grounds in Iceland in June and July and recovered in France in May. Further corroboration is provided by a bird ringed on Fair Isle on 23rd May, 1961 and recovered on 10th May, 1962 in north-west Spain. Of the 18 recoveries of Dunlin that can reasonably be assumed from the date of ringing to have bred or been bred in Britain, seven show a movement of over 30 miles, all of them in a southerly direction with recovery dates in autumn or winter, one reaching the south coast within a month of being ringed in Westmorland.

### References

- MARTIN-LÖF, P. 1958. Storleksskillnader hos genomsträckande Kärnsnapper (*Calidris alpina* (L.)) vid Ottenby. *Var Fagelvärld*, 17 : 287-301.
- NØRREVANG, A. 1955. Rylens (*Calidris alpina* (L.)) track i Nordeuropa. *Dansk ornith. For. Tidsskrift*, 49 : 18-49.
- SALOMONSEN, F. 1953. *Fugletraekket og dets gader*. København. 224 pp.
- SALOMONSEN, F. 1954. The migration of the European Redshanks (*Tringa totanus* (L.)). *Dansk ornith. For. Tidsskrift*, 48 : 94-122.
- SALOMONSEN, F. 1955. The evolutionary significance of bird-migration. *Dan. Biol. Medd.*, 22, No. 6 : 1-62.