Bulletin No 7.

November 1972

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First of all we would like to apologise for the delay in production of this bulletin, one of us was away for the whole of October. However in this bulletin are reports from all the expeditions which left Britain to catch waders in other countries. These provide the extremely valuable information needed by all wader ringers if we are to understand the migration of waders.

One aspect that many of you reading these bulletins will note is that few of the contributions come from Britain. It is time that more British ringers analysed and published their results, this bulletin was started just for this function, so lets have them rolling in.

Ringing Conference 1973: On the Friday evening we will be able to hear Guy Morrison and James Wilson talking on and, we hope, showing their film of the 1972 Cambridge Iceland Expedition. Later on Saturday evening the Wader Study Group will have its business meeting and combine it with talks on the Greenland, Morocco and Swedish/Danish trips. The agenda for the business meeting is enclosed with this bulletin, if anyone has any other item(s) which they wish to raise please will they let Tony Prater have them before the meeting.

Editors addresses

Peter Stanley will be shortly moving, it would be best if any correspondence was sent to him at Pest Infestation Control Lab., M.A.F.F., Hook Rise South, Tolworth Surbiton, Surrey (01 337 6611, ex. 457).

Tony Prater remains as before but the home telephone number is now Cheddington 668862.

1973 Subscriptions

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It would be a great help in keeping down administration costs if you could let Ron Birch (8 Thornberry Close, Saughall, Chester) have them as soon as possible, if you are not coming to the Ringing and Migration Conference.

| KLINGLING TOTALS | | | | | | | | | |
|--|----------|--------------|------------------|-------------------|-------------|--------|---------|-------------------|--|
| | RB | WW RG | SBO | TRG | MBWG | SVRG | FRG | ARG | |
| Oystercatcher Lapwing | 1 | 157 | | 46 25 3 | 78 | 5 | 18 | 22 30 4 | |
| Ringed Plover Grey Flover | 13 11 | 6 62 | 2 | 11 | 213 | | 15 1 | | |
| Golden Plover | | 4 | | 1 | | | | 9 | |
| Turnstone Common Snipe | 4- | 186 | | 2 | 123 | 1 | 6 | 10 | |
| Jack Snipe Curlew | | 22 | | 9 | 31 | • | 1 | 59' | |
| Whimbrel Black-tailed Godwit | | 1 | | | | | 2 1 | | |
| Bar-tailed Godwit Green Sandpiper | | .6 | | | • | 1. | • | | |
| Common Sandpiper Redshank | | 1 | 2 | 0.1 | | 4 1 | 15 | 8 | |
| Spotted Redshank | | 231 | 13 | 24 | 94 | 3 | 6 | 45 | |
| Greenshank Knot | 1 4 | 2 947 | | | | 6 | 13 2 | | |
| Dunlin Sanderling | 113 1 | 1 384 284 | 183 | 6 | 1448 150 | 8 | 145 | | |
| Little Stint Curlew Sandpiper Purple Sandpiper | | 1 16 | 11 · 8 · 3 | | 1 5 1 | • | 4 | | |
| _ | | | _ | | | | | | |

Initials not used before: RB - Rob Berry

SBO - Spurn Bird Observatory
SVRG - Severn Vale Ringing Group

RECENT RECOVERIES

Few recoveries were reported within Britain; there being six birds ringed in Morecamb Bay and three ringed in the Burry Inlet all recovered in Scotland.

Lapwing

| FG | | East Tilbury, Essex | + Estremadura, Portugal + Bryansk, U.S.S.R. | 25 . 6.72 1 5. 8.71 |
|----|---------|---------------------|--|--------------------------------------|
| Ad | 8.11.69 | Wolferton, Wash | + Jylland, Denmark | 12.8.72 |

Ringed Plover

The bird from Dahomey is the furthest south British Ringed Plover recovered to date. Also of note are two birds which were breeding on the Wash and were controlled in Morecambe Bay, one in autumn and one in winter.

| Juv PJ Pull Ad Ad Juv PJ Ad Ad | 25.5.72 20.6.72 28.7.64 | Snettisham, Wash Bardsea, Morecambe St Cyrus, Kincards. Blithfield, Staffs & 4.4.69) Snettisham Hoylake, Dee Farlington, Hants Thornham, Wash West Kirby, Dee Snettisham | + Porto Novo, Dahomey + Calvados, France v Walney, Morecambe v Newbiggen, Morecambe v Hest Bank, Morecambe v Hest Bank, Morecambe x Rye, Sussex v Hest Bank, Morecambe v Bardsea, Morecambe v Hest Bank, Morecambe | 28.3.71 5.9.72 24.9.72 10.9.72 29.1.72 5.8.72 13.6.72 29.1.72 23.8.72 5.8.72 |
|--|--|--|--|---|
| Turn | stone | | | |
| FG Ad Ad 1 Y | 30.8.64 9.3.69 19.9.71 28.11.70 | Hilbre, Dee Snettisham, Wash Heysham, Morecambe Bardsea, Morecambe | v Snaefellsnes, Iceland v Skorhagi, Iceland v Eyri, Iceland x Grisslehamn, Sweden | 18.5.72 6.8.72 23.5.72 19.7.72 |
| Snip | e | | | |
| FG · 1Y | 19.8.69 11.9.71 | Manchester Wigan, Lancs. | + Sobinka, U.S.S.R. + Aberfeldy | 14.8.71 26.8.72 |
| Jack | Snipe | | | |
| PJ | 9.10.69 | Worksop, Notts. | + Bunbridge, Co. Down | 26.1.72 |
| Curl | ew | | | |
| FJ _. Ad | 21,12.68 2,9.69 | Pocle Harbour Cherry Cob, Humber | x Vaasa, Finland x Bere Alston, Devon | 15.5.72 16.8.72 |
| Reds | <u>hank</u> | | | |
| Ad | 3.9.67 8.3.70 16.8.69 9.8.66 4.10.70 10.10.70 | Snettisham, Wash Middleton, Morecambe Harty, Kent Sutton Bridge, Lincs. Aldingham, Morecambe Conway | <pre>v Hafnarfjordhur, Iceland v Skogarnes, Iceland x Essacuira, Morcocc v Farlington, Hants. x L. Harray, Orkney x Seascale, Cumb.</pre> | 25.7.72 19.7.72 0.8.72 26.9.72 0.6.72 10.9.72 |

Knot

During this period no fewer than 15 Knot were recovered in Greenland, 2 in Canada and 130 in Iceland. The number of Greenland and Canadian recoveries is unprecedented, the latter being the first in that country whilst the Greenland recoveries more than doubled the previous number from that country.

| PJ | 14.2.71 | Southerness, Sclway | + Broughton Is., Baffin, Canada | 11.6.72 9.6.72 |
|----------------------|----------|----------------------|--|-------------------|
| Ad | 19,3.72 | Snettisham, Wash | + Broughton Is., Baffin, Canada | |
| Ad | 8.2.70 | Middleton, Morecambe | x Dundas, Greenland | 4.6.72 |
| Ad | 8.2.70 | 11 | + Egedesminde, Greenland | 10.6.72 |
| Ad | 8.2.70 | 11 11 | + Thule, Greenland | 9.6.72 |
| Ad | 29.1.72 | Point of Air, Dee | + Egedesminde, Greenland | 9.6.72 |
| Ad | 28.1.68 | Wolferton, Wash | + Thule, Greenland | 1 6.6. 72 |
| Ađ | 24.11.68 | Heacham, Wash | + 11 11 | 3.6.72 |
| $\Lambda \mathbf{d}$ | 24.11.68 | 77 71 | and the state of t | 3 . 6.72 |
| Ad. | 7.3.70 | 11 11 | + " " | 0.6.72 |
| Vq | 8.3.70 | 11 11 | + " " | 16.6.72 |
| L | 27.2.71 | Snettisham, Wash | + Egedesminde, Greenland | 6.6.72 |
| $_{\mathrm{PJ}}$ | 11:8.71 | N. Wootton, Wash | + Thule, Greenland | 16.6.72 |
| Ad | 19.2.72 | Snettisham, Wash | + Thule, Greenland | 5.6.72 |
| Ad | 19.2.72. | 11 11 | + S. Davis Strait, Greenland | 29.5.72 |
| h | 17.9.70 | Snettisham, Wash | + Thule, Greenland | 9.7.72 |
| λd | 27.2.71 | " " | + 11 11 | 0.7.72 |
| Ad | 22.12.68 | Piel, Morecambe | + Jutland, Denmark | 4.8.72 |

| PJ | 16.4.69 | Hest Bank, Morecambe | + Jutland, Denmark | 2 6. 8.71 |
|------------|----------|----------------------|---------------------------|------------------|
| Αđ | 8.2.70 | Middleton, Morecambe | + " " | 6.8.72 |
| Ad | 5 1.71 | Thurstaston, Dee | m Ameland, Netherlands | 15.8.72 |
| 2 Y | 24.2.71 | Ho, lake, Dee | + Manche, France | 4.9.72 |
| ĥã | 22.12.68 | Fiel, Lorocambe | + Beira Litoral, Portugal | 0.11.71 |

In addition there were b birds from Morecambe Bay controlled on the Wash and 2 on the Ribble. In the Wash there were also 6 birds controlled from the Dee, and one each from the Solway and the Swale. There was a single bird ringed on the Wash and found dead on the Orale.

+ Vinnitsa, Ukraine SSR

x Schiermonnikoug, Netherlands

11 11

v Vlieland, Netherlands + Nord, France x Ille et Vilaine, France

- Beira Litoral, Portugal

v Puerto Cansado, Morceco

14.8.71

17.9.72

8.9.72

21.7.72

31.7.72

0.11.71

9.9.72

25.8.72

Curley Sandpiner

Holbeach, Wash

Bowdence, Morecambe Downsore, Wash Editous, Morey

Transfer tor, Anste

ii, Klady, Dro

Harty, Faile

Juv 28.6.69

| FJ PJ | 14.3.71 28.8.72 | Wisbech, Jambs. Komsley, Kent | v Pori, Finland + Calvados, France | 11.8.72 29.8.72 |
|-----------|--------------------|----------------------------------|---------------------------------------|--------------------|
| Dun. | Lin | | | |
| ia. | 11.8,63 | werrington, Wash | x Murmansk U.S.S.R. | 18.10.71 |
| 4वी | 4.4.59 | Jhobtachem. Wash | x Komi, A.S.S.R. | 23.5.71 |
| 21 | 25.2.71 | 11 11 | + Arkhangelsk, U.S.S.R. | 4.10.71 |
| بآليم | 5.2.67 | Harty, Sucle | v Stokkseyn, Iceland | 25.5.72 |
| 1 7- | 16.2.63 | Dangness, I.o.Man | 7 Akrar, Iceland | 17.7.72 |
| 177 | 9.8.71 | Tollington, Wash | v Akrar, Iceland | 29.7.72 |
| 11 | 13.2.39 | Tiel, Morecombe | y Pori, Finland | 4.8.72 |
| <u>14</u> | 30,8,69 | Toinington, Wash | v Ottenby, Sweden | 5.8.72 |
| 1.1 | 20.1.72 | Toint of Air, Dee | v Ottenby, Sweden | 6.8.72 |
| -ld | 4.3.70 | Carnforth, Lorscambe | v Torhamn, Sweden | 31.7.72 |
| FG | 13,11,63 | Komsley, Śwale | x Amager, Denmark | 21,8.72 |
| Àũ | 2.1.72 | Comay ^{® S} ay | + Jutland, Denmark | 15.9.72 |
| Αđ | 5.3.72 | Mordea, Dartsmouth | r Langwarden, W. Germany | 20.5.72 |
| FG | 7.9,60 | Malltractly Anglesey | + Vlieland, Netherlands | 27.7.72 |
| Ad. | 2.12.67 | Parlangton, Portsmouth | v " " | 29.9.72 |
| | | | | |

Among the interesting movements within Britain two Dee ringed winter Dunlin were controlled on the Wash on 28.8.72. Other British movements were

| Ad | 25.7.71 | Farlington, Portsmouth | v Foulney, Morecambe | 16.7.72 |
|-------------|---------|------------------------|------------------------|---------|
| Λd | 30.9.69 | Dungenous, Kent | v Newbiggen, Morecambe | 10.9.72 |
| Ad | 24.7.72 | Garmouth, Moray | v Wolferton, Wash | 29.8.72 |

Sanderling

Αđ

 $_{\mathrm{PJ}}$

FG

17

28.5.71

7.9.67

18.007

9.9.67

Juv 18.9.7

1Y - 9,10.71

| | | Point of Air, Dee | + Dakar, Senegal | 26.1.72 23.8.72 |
|------|---------|-------------------|------------------|--------------------|
| 270. | 21.0:10 | Hoylake, Dee | + Mord, France | 27.00.12 |
| PJ | 13.7.68 | Snetticham, Wash | + Manche, France | 7.8.71 |
| 1 Y | 18,9,71 | Thornham, Wash | x Alger, Algeria | 18.2.72 |

In addition there were few distant controls within Britain involving the Dee, Humber, Mcrecambe Bay and the Wash.

Ruff .

Ad. F. 23.8.69 Wisbech S.F., Cambs. v Munster, W. Germany 10.8.72

University of Dundee N.E. Greenland Expedition 1972

G.H. Green and A.E. Williams

On the 10th July 1972 two rather excited members of the Wash Wader Ringing Group set off to Scotland to join this expedition. That night we flew to Iceland and on the 12th left keykjavik by charter flight to NE Greenland arriving at Mestersvig (76°16'N', 23°55'W) at 21.00 hours in brilliant sunshine. As soon as our temporary camp had been pitched were were off on our first walk over the tundra, not returning until 04.00 - but still in brilliant sunshine! Long-tailed Duck, Red-throated Divers, Glaucous Gulls, Arctic Terms, two pairs of Dunlin, one pair of Ringed Plover and Snow Buntings were cur introduction to Arctic Crnithology, and all set amongst the most fantastically beautiful scenery and under blue sky with brilliant sunshine and complete calm. Next day we moved camp and settled on a site overlooking Kong Oscar's Fjord which was our base until September.

Our aim was to catch, ring, weigh and measure some breeding waders. It turned out to be rather difficult: The breeding population was thinly spread over many miles of country and the season was poor, probably because of bad weather in June and July. Mon-breeding process, or years of poor breeding are well known occurances in the Arctic and unfortunately cannot be forecast. The most commonly occurring wader was the Ringed Plover which was found wherever there were areas of small broken stones, peobles or shingle but although we found many birds holding territory we found very few nests (only 4) and saw very few juveniles later in the season. Dunlin were less common and restricted to beggy places or rather wet tundra. Sanderling were even less frequent. We only saw Turnstone occasionally and Knot rarely. We did not record Purple Sandpiper or Phalaropes. We spent a great deal of time fruitlessly watching waders on territory hoping for clues to nest or young and wexwalked many miles in search of waders.

It was impossible to catch waders on territory in a wide open landscape when there was daylight for weeks on end and when there was no nest - or we could not find one. When we found nests of Ringed Flover and Dunlin we caught the adults quite easily with drop trap or single shelf mist net. AEW had the remarkable experience of lifting a broading Sanderling (3 pulli) from its nest by hand - and it was back on its young within 30 seconds of being released while we stood a few yards away.

The large areas of sandy beach and estuarine silt near Mestersvig were quite unsuitable for waders, probably because they were peor in invertebrates. Breeding waders feed on insects and other arthropods living on the tundra. We rarely saw gatherings of waders and our largest flock, which we saw only once, was of 19 young Sanderling feeding along several hundred yards of beach where seaweed had been exposed by a low spring tide. We might have caught these with 'walk-in' traps but this was the one catching method we did not take and could not make. Improvisations with single shelf mist nets caught one Sanderling and one Ringed Plover. Later experiments with a clap net failed. On several occasions we might have successfully used 'walk-in' traps is we had carried them on our backs ready for instant use. Although we set our canron net we never had a chance to use it. Wader movements were unpredictable and birds were rarely seen in the same place twice. A cannon net is too unwieldy and heavy for two men to carry about the tundra on the offchance that it might be useful!

| Species | Ringed | | Shot | Total Measured | |
|---------------|--------------|--------|-------|----------------|----|
| | <u>Pulli</u> | AD/Juv | Total | | |
| Ringed Plover | 5 | 5 | 10 | 7 | 12 |
| Dunlin | 4 | 2 | 6 | 1 | 3 |
| Sanderling | 3 | 2 | 5 | O | 2 |

We measured too few birds to fulfill our hope of characterising the NE Greenlar breeding waders. However, the sample from Ringed Plover is useful, and these measurements and those from the Dunlin may be directly compared with data collected in Britain. The birds were measured by GHG who has measured many waders in Britain and who is known to obtain measurements matching those collected by other wash measured Several birds were shot (we had a permit) to increase the sample size of the commons Ringed Flover and to collect samples of food from oesophagus and gizzard.

It seems worthwhile reporting our measurements in full, and for the present without comment.

| Species | Date | <u> ikee</u> | Ving. | Bill | Weight | |
|---------------|--|----------------------------------|--|----------------------------|----------------------------------|---|
| Ringed Plover | 14.7 15.7 19.7 19.7 28.7 28.7 | Ad Ad Ad Ad Ad Ad | 131 130 135 132 131 125 | 14 13 14 13 14 | 53 62 61 57 55 54 | shot - male shot - male |
| | 10.8 10.8 12.8 17.8 21.6 | Ađ Ađ Ađ Ađ Ađ Ađ | 131 133 131 134 134 129 | 13 14 13 13 13 | 50 54 61 75 70 58 | shot - male shot - fenale shot - male shot - male shot - male |
| Dunlin | 25.7 29.7 30.7 | Ad Ad Ad | 109 109 115 | 26 27 30 | 47) 42) 40 | pair from same nest shot - female |
| Sanderling | 4.8 10.0 | AC Juv | 127 126 | 2 6 2 4 | 60 50 | |

Hearly all the adults and the juvenile were dye marked yellow on their underparts and a tall white colour ring was placed on their left legs (Danish metalering on the right. We hoped for later sightings (Wader Study Group Bulletin No. 6) and we have been rewarded by two incredible records. Of the 5 ringed plover so marked two have been seen in England! In both cases the marks and colour rings were accurately described by the observer. One bird was seen at the mouth of the Witham near Boston, Lines, on the 20th August and again on the 23rd. The second was seen at Draycote Reservoir, Warwicks, on the same date - 20th August! As far as we are aware these are the first proven records of NE Greenland Ringed Plover in Britain. Salomonsen (1971) Med. om Greenland 191, 2, 1452, mentions the recovery of one bird which was ringed near Perry Oaks, Middlusex on 22.8.62, and found in NY Greenland during June 1964 but apart from this the only other recoveries of Greenland Ringed. Plover are in Iceland, and one shot at Mestersvig, 21.7.64 which had been ringed in Senegal 22.10.58.

Although we did not catch many waders and therefore largely failed in our aims to characterise NE Greenland birds by measurement we have gained a great deal of practical experience and feel that a future expedition could be more successful, ga a good breeding season, a lot of energy and enough money! We doubt whether large scale wader ringing will ever be possible in this part of Greenland but a highly energetic expedition reaching Greenland in June could catch a good number of birds at the nest. It is a long way from pair to pair and valuable days would be spent foot-slogging. If sufficient people went to Mestersvig and then had the use of a helicopter to scatter them over a wide area much more ground could be covered quite quickly. Inflatable boats with powerful outboard motors would be useful after the pack-ice had broken up - but this is not until after about 20th July.

We would like to thank the other members of the expedition for their interest and help, particularly those of the biology party, and especially R.W. Summers who helped in many ways.

Cambridge Iceland Expedition 1972

The Combridge Iceland Expedition 1972 carried out a programme of research lasting six months, from April until October 1972, involving ringing and migration studies both of passage waders and breeding birds and pulli in Iceland. Detailed observations on the passage of waders through Iceland were made in spring and autumn and studies on moulting birds carried out in the autumn. Feeding studies were carried out during July and August.

Fourteen members tack part in the expedition, with a maximum of 7-9 present during the passage periods. Guy Morrison and James Wilson spent six menths in Iceland, Angela Morrison and Duncan Rothwell five and h_2^+ months respectively and the other members spent up to one menth during peak passage time. Transport was in two Land Rovers, one short—and one long—wheelbase, which were equipped with VHF radio—telephones, a feature which proved essential for effective operation in many coastal areas and at specific catching sites. The expedition was financed principally through trants from the NERC and Royal Society, with further significant and generous contributions from the B.O.U., B.T.O., W.A.G.B.I. and a number of other granting bedies, trusts and industrial concerns. The Wash Wader Ringing Group again very kindly loaned two cannon net sets, which were fired 101 times!

A total of 5,955 birds was caught during the expedition (Table I), 2,261 during the spring passage, 805 pulli and breeding birds and 2,889 birds during the autumn passage. 231 ringed birds were caught, including 140 carrying British rings, 130 Cf which were Knot (Table II). During the excedition 512 Nest Record Cards and 346 Moult Cards were completed (Table 3). All birds caught were processed.

Guy Morrison, James Wilson and Duncan Mothwell arrived in Ideland on 4th April and after a few days seent in clearing our equipment and vehicles, were seen at large carrying out an extensive programme of recommaissance on the western coasts. Oystereatchers, which had already arrived, and Redshank were amongst the few waders found an the shore, though these dispersed very quickly to take up their breeding territories. Apart from small numbers of Purple Sandpipers and Turnstones, which winter in Icelana, the beaches were rather empty, though several small and useful catches were made. In the latter half of April and early May huge numbers of waders arrived - Knot, Turnstone, Purple Sandpipers, Golden Plover, Snipe, Thimbrel etc. Angela Morrison, Rob Wilson, David Pearson and Grenville Clarke joined the expedition and work continued at an extremely hectic page throughout the month, the lack of darkness meaning that practically every tide could be worked. Catches were made at many sites on the west and south coasts, the largest being 560 at 3.30 a.m. on a small island in Hvalfjordur which could only be reached by boot at high tide. In aerial survey of the principal bays around the Snaefells Peninsula was made in mid-May and accounted for about 50,000 Knct in this area. A B.B.C. television film team visited the expedition and some of the material will be included on the programme on Iceland in the series 'The World About Us', scheduled for December 1972.

In early June, Guy Morrison and James Wilson presented papers at the 2.0.U. Conference which was held in Reykjavik, and then work on pulli and breeding birds started in earnest. Working as two independent teams, the entire coastline from the Northwest to the middle of the south coast was covered, with a further survey of the north coast as far east as Myvath being carried out. 855 pulli and breeding birds were ringed and two of these have already been recovered - both Redshank, one in Lymington, Hampshire and the other in Denmark.

By mid-July, large numbers of waders were again on the shore and we were thrown unceremoniously back into the cannon netting routine. Tony Prater, Chris Clapham, Andrew Cadman and William Dick arrived, also Julian Limentani and Susan Danswan who carried out a programme of feeding studies. Nork was again hectic, to say the least, with semething like five consecutive tides being worked at one stage involving two sites more than 50 miles apart. Dunlin, which were very scarce in the spring, were now a target species with many on the shore, and our data showed that both they and the Knot passed through rapidly, putting on much less weight than in the spring. The main passage finished by mid-August and in early September we were joined by Clare Lloyd for the final phase of the work. Particular attention was paid to Purple

Sandpipers and Oystercatchers which remained in localand to moult before migrating. Huge numbers of geese were seen on passage, including flocks of 4-5,000 Brent Geese in one small area on the west coast. Work drew naturally to a close in early October.

Already 19 Knot and 1 Turnstone have been controlled in Britain; also one Knot in Denmark and one in Germany, as well as the two Redshank mentioned above.

Further information on the expedition may be obtained from R.I.G. Morrison (c/o B.T.O.), and copies of the 1971 Report, containingt full scientific results, may be obtained from Tony Prater (price 60p.)

TABLE I

TOTALS OF BIRDS RINGED ON THE CAMBRIDGE ICELAND EXPEDITION 1972

| | | Adul | ts | | Juvs | 5 | | Pull: | i | Total |
|----------------------|---------------|------|------------|---|------|-----|---|-------|-----|-------|
| Species | C | R | NR | C | R | NR | С | R | NR | |
| Red-throated Diver | _ | - | - | - | - | - | _ | _ | -1 | 1 |
| Fulmar | - | _ | - | - | - | 3 | - | | 1 | 4 |
| Grey Lag Goose | _ | _ | 3 | _ | _ | _ | _ | _ | 4. | 7 |
| Oystercatcher | 2 | 6 | 124 | | 6 | 124 | _ | 26 | 214 | 502 |
| Ringed Plover | - | 2 | 45 | | 1 | 9 | _ | 11 | 135 | 203 |
| Golden Plover | _ | - | _ | _ | - | - | - | - | 40 | 4) |
| Turnstone | 28 | 58 | 816 | _ | 3 | 28 | _ | - | - | 933 |
| Purple Sandpiper | 3 | 8 | 408 | _ | 15 | 256 | _ | 1 | 8 | 699 |
| Dunlin | 6 | 21 | 357 | | 17 | 242 | _ | _ | 14 | 657 |
| Knot | 190 | 52 | 2098 | - | - | 14 | _ | - | | 2354 |
| Sanderling | _ | _ | 84 | _ | - | - | - | - | - | 84 |
| Redshank | 2 | - | 43 | | _ | 28 | - | 6 | 129 | 208 |
| Black-tailed Godwit | _ | _ | - | - | _ | - | - | - | 2 | 2 |
| Whimbrel | _ | _ | 1 | _ | _ | - | _ | 5 | 97 | 103 |
| Snipe | ,- | _ | 3 | _ | _ | - | _ | _ | | 3 |
| Red-necked Phalarope | _ | - | 59 | _ | _ | 5 | _ | - | 6 | 70 |
| Arctic Skua | _ | _ | _ | - | _ | _ | - | - | 7 | 7 |
| Black-h aded Gull | - | _ | 18 | - | _ | 12 | - | - | 3 | 33 |
| Kittiwake | - | _ | 1 | _ | - | _ | - | _ | - | 1 |
| Arctic Tern | _ | - | l_{+} .) | _ | - | 1 | _ | - | 3 | 2+2+- |
| Wheatear | - | | - | | | - | _ | - | 4 | 4 |
| Redwing | - | - | - | - | - | | - | - | 3 | 3 |
| | 231 | 147 | 4100 | - | 35 | 722 | - | 49 | 671 | 5955 |

C Control R Retrap

NR Newly ringed

TABLE II

SUMMARY OF BIRDS CONTROLLED BY CAMBRIDGE ICELAND EXPEDITION 1972

| | 0/C | T/S | P/S | Dunlin | | R/S | Total. |
|------------------------------------|-----|-----|-----|--------|-----|-----|------------|
| British | 1 | 4 | - | 3 | 127 | 2 | 137 |
| British already carrying Icelandic | _ | - | - | - | 3 | - | 3 |
| Icelandic (other ringers) | _ | - | _ | - | 1 | - | 1 |
| Icelandic (own, but moved 5 km.) | _ | - | 1 | - | 2 | - | : 3 |
| Icelandic: from 1970 | 1 | - | _ | | 48 | | 49 |
| from 1971 / | - | 24 | 1 | 3 | 9 | - | 3 7 |
| Norwegian | _ | - | _ | - | 1 | - | 1 |
| Dutch | | - | 1 | - | - | - | 1 |
| | 2 | 28 | 3 | 6 | 190 | 2 | 231 |

TABLE III

SUMMARY OF NEST RECORD CARDS AND MOULT CARDS COMPLETED BY THE CAMBRIDGE ICELAND EXPEDITION 1972

| | Nest Record Cards | Moult Cards |
|----------------------|-------------------|-------------|
| Oystercatcher | 1 74 | 145 |
| Ringed Plover | 88 | 2 |
| Golden Player | 39 | - |
| Turnstone | ~ | 28 |
| Purple Sandpiper | ۷- | 124 |
| Dunlin | 12 | - |
| Sanderling | _ | 1 |
| Redshank | 99 | 17 |
| Black-tailed Godwit | 5 | - |
| Whimbrel | 73 | - |
| Snipe | 4 | - |
| Red-necked Phalarope | 6 | - |
| Arctic Skua | 7 | - |
| Black-headed Gull | - | 2 C |
| | 512 | 346 |

The N.W.R.G. Visit to Denmark and Sweden, August 1972 New information on the timing of Dunlin wing moult

by P. Stanley

It is unfortunate that considering the large amount of interest in waders in Denmark and Sweden there is so little liaison between ornithologists in these countries and workers in Britain. With this in mind and with the intention of obtaining measurements of waders on passage through the Baltic a small party composed of Mike and Daphne Matson and Peter and Judy Stanley visited Fenno-Scardia in August 1972.

Our first call was at Blaavands-Huk on the west coast of Denmark where for many years the visible migration of waders has been intensively studied. This field of wader research which has been somewhat neglected in Britain has produced valuable information that when analysed in conjunction with ringing data has allowed a more comprehensive picture of wader migration to be drawn than can be obtained from ringing data alone. Thus, workers at Blaavands-Huk have produced an interesting paper on the migration of the Knot through the North Sea and their paper on the general visible wader migration at Blaavands-Huk is extremely valuable.

The party spent almost a week at Ottenby Bird Observatory situated on the southern tip of the island of Oland that lies off the S.F. coast of Sweden. Ottenby has long been famous for the pioneer work on passerine and wader migration started at the beginning of this century and large numbers of waders have been trapped for many years. The catching technique is based on cage traps that are placed on the banks of rotting seaweed that build up around the rocky shoreline. Because the Baltic is not tidal, the traps can be placed at the waters edge and when visited every 45 mins. during daylight have produced satisfactory numbers of waders. We were very impressed by this trapping method and feel sure that it could be applied with success in Britain. The efficiency of catching is high and the technique should be ideal for trapping freshwater waders on pools etc. where the water level is relatively stable. (Jack Reynolds has recently used eage traps successfully in N. Norfolk to catch Snipe and other fresh water waders.)

With the generous cooperation of the Ottenby Bird Observatory, the party were able to measure approximately 200 waders including a valuable sample of 130 Dunlin. The Dunlin proved to be particularly interesting because a significant proportion of the adults were migrating in suspended wing moult. The sample of 130 contained 4 juveniles and 70 of the adult birds had eleven old primaries and had not started

moulting. Fifteen tirds were in typical suspended primary moult with from 1 to 7 fully grown new primaries and a full complement of old primaries. A further 24 birds had virtually suspended their moult with a full wing of old and new primaries except for one new primary at an advanced stage of feather growth (stage 3 or 4). Of the remaining birds, many had almost full wings with a number of new primaries growing in a block (e.g. 8 old and 5 new at stage h). The Dunlin at Ottenby during this period were on migration, only stopping to feed for a matter of hours and retraps of birds ringed more than 12 hours previously were very rare. The sample contained two British ringed Dunlin:

BB 93182 ringed as an adult 30.8.69. Terrington, Norfolk
BH 87377 " " " 29.1.72. Point of Air, Flintshire

The sample can thus be considered to contain birds belonging to the populations, that visit Britain. It is considered unlikely that they had stopped elsewhere on their migration long enough to start moulting and thus these Dunlin probably start their moult on the breeding grounds. It is interesting that a catch made on the Wash on 28.8.72 contained 1 Dunlin in suspended moult and Dunlin in suspended moult were also recorded in Merocco, (see M. Pienkewski in this bulletin). It is of course logical that a small bird such as a Dunlin would undertake a migration with a full wing, active wing moult would probably decrease flight efficiency and entail greater energy consumption.

One striking feature of the Dunlin ringing at Ottenby is that the observatory very rarely controls birds ringed in Previous years — a very different situation to Dunlin ringing in Britain. A useful number of juvenile Wood Sandpipers were trapped and a further ten species of wader handled.

1972 was a very bad autumn for wader trapping in Sweden, the number trapped at Ottenby being well form on normal years. Our next stop was at the Falsterbo Bird Observatory that is situated on the scuthern tip of Sweden. This Observatory is, of course, famous for the bird of prey passage but considerable numbers of waders are trapped in July and August. The trapping site is a pool with patchy vegetation a small distance inland from the shore and once again cage traps are employed. The main species caught are Dunlin, Snipe and Sandpipers.

We were very fortunate in having Niels Otto Preuss, the organiser of the Danish ringing scheme to introduce us to Denmark and especially to show us the famous wader tinging site at Amager. It is to be hoped that at least part of this tremendous site can be maintained as a reserve pather than be lost to urban development.

The rest of our stay on the continent was sent observing waders in Denmark and Holland. We would like to thank all the people in Denmark and Sweden who made the trip so enjoyable and worthwhile. Considerable interest was shown in the W.S.G. and we now have a number of Danish and Swedish members.

Cambridge Sidi Houssa (Morocco) Expedition 1972

by Derek Stanyard

As a follow up to the Moroccan Expedition of 1971 a team of ringers spent 10 days minetting waders on an area of salt lagoons about 400 miles down the Atlantic coast of Morocco, during September of this year.

The Moroccan Administration dos Eaux et Forets granted permission for the expedition to operate and the Institut Scientifique Cherifien (Rabat) supplied rings

The comparatively short period spent on the site proved extremely rewarding, in all 1300 birds were caught of which 1150 were waders. Besides a large number of valuable retraps and controls from last year, the group also controlled birds from Sweden (2 Curlew Sandpiper and 1 Ringed Flover), Germany (1 Curlew Sandpiper) and Britain (2 Dunlin), One of the Dunlin having been ringed on the Wash two months previously.

The species totals for waders caught in the 10 days are as follows:-

| Ringed Plover | 79 | Greenshank | 20 |
|-------------------|----------------|-------------------|------|
| Kentish Plover | 55 | Knot | 15 |
| Grey Plover | 1 | Little Stint | 100 |
| Turnstone | 2 | Temmincks Stint | 1 |
| Curlew | 1 | Dunlin | 460 |
| Black-tailed Gody | wi t 15 | Curlew Sandpiper | 267 |
| Bar-tailed Godwi | t 9 | Ruff | 6 |
| Common Sandpiper | 15 | Black-winged Stil | lt 8 |
| Redshank | 9,1 | | |

It is hoped that a full report of "the Expedition" will be published within the next few months.

As a footnote wader ringers may like to note that owing to a lack of available French rings of the correct size "the Expedition" used 800 British rings in Morocco.... an incentive perhaps to send in controls promytly.

University of East Anglia Expedition to Tarfaya Province, Morocco 1972

by Mike Picnkowski

In W.S.G. Bulletins 4 and 6 I outlined the results of the 1971 work on waders in Morocco conducted by the UEA Expedition and gave reasons for return visits. This year two such expeditions took place - one led by Derek Stanyard to continue work at the excellent catching site at Sidi Moussa in Morth Morocco in September (which is described elsewhere in this bulletin) and the present one aimed at extending the work to Puerto Cansado, a coastal lagoon in the extreme south of Morocco (see map) near the border with Spanish Sahara (Rio de Oro).

We left England in mid-July and travelled fairly rapidly through France and Spain to arrive in Morocco on 24 July. After a brief stop at Rabat to collect rings and discuss prospects with Monsieur Thevenot and Monsieur Elkaim of the Institut Scientifique Cherifien - who were as ever most helpful and hospitable - we moved on to Sidi Moussa to arrive on 27 July, the day after the spring tide.

It was our intention to spend a few days here before moving on south to our main area of study. This would give us the opportunity of catching some of the birds already at Sidi Moussa and establish several points on, for example, the moult and weight graphs for comparison with those of the Cambridge Expedition 5 or 6 weeks later. In addition, of course, there was the possibility of retraps giving valuable weight change and moulting rate data on individual birds. For three days cannonnetting attempts were made on the tidal lagoon at the mouth of the marsh system but despite several near misses only one small catch of 1 Avocet, 2 Dunlin, 3 Greenshank and 1 Grey Plover resulted. A further 3 days were spent mist-netting on the salt pans (which were to be the Cambridge Expedition's main working area) with catches of 57, 23 and 15 respectively, the neap tide being reached on the last night and the waders then not being forced off the adjacent salt marsh. Kentish Plover, Redshank Dunlin and Curlew Sandpiper were the main species caught but there were also a few Ringed Plover, Black-tailed Godwit, Common Sandpiper, Greenshank, Little Stint and Black-winged Stilt. An extra bonus was provided after dawn on the last morning by 2 Swallows and a Woodchat Shrike. Our catches included 2 Kentish Plover and 2 Redshank retraps from 1971 and one of the Kentish Plovers was again retrapped by Derek Stanyard's group in September.

On 4 August we headed south in the hope of reaching Puerto Cansado by the spring tide of 10 August. The road is fully made up and presents no obstacle as far as Tan Tan and slightly beyond but Puerto Cansado lies 100 miles beyond this town. The first part of the route beyond the end of the road consisted of rough desert tracks (at times existing more in name than in physical reality) but the last few miles were completely cross-country - around dunes and over sand drifts and boulder desert.

The route passed over the Cued (River) Chebeika where we had stayed for some time 1971. Here a bank had been built across the estuary to extend the road further south. The tidal flow had thus been cut off leaving a large lake on the inland side of the bank. This, of course, has ruined the estuary for maders although a flock of several thousand Lesser black-backed Gulls have moved in. The bank is to be cut in the near future by the building of a 150 metre long bridge which hopefully will allow tidal flow again. However, since the building of the bank and due to the lack of scouring, the sea beach has been drifted across the mouth of the river forming a second barrier. There are some doubts as to whether the full tidal nature of the estuary will be restored.

Our hoped of arriving at Puerto Cansado in time for the spring tides were dashed on the evening of 9 August when our locally employed guide lost his way and lod us if a sand drift on a steep slope. Our efforts to extract the Land Rover resulted in the complete shattering of the near differential. We were shortly joined by one of the lorry drivers who use the desert track to supply Tarfaya, a town near the Rio de Oreborder. He had a similar problem having broken his prop shaft about 300 metres away at almost the same time!

Leaving all the equipment in the desert and half of the expedition members to guard it, we returned with difficulty to Tan Tan using front wheel drive only and the managed to obtain and fit a very old and dusty second hand differential. However, the procedure cost us 5 days and delayed our arrival at Puerto Cansado until 15 August, thus missing the spring tide series.

The lagoon is 21 km. long and up to 5 km. wide and is bounded on the east and south by cliffs; on the west by large sand flats backed by an extensive dune system which also spreads along the coast. The lagoon opens northwards to the Atlantic and consists of 7 km. of sand flat lagoon leading into 8 km. of salt marsh, this in turn widening out to a sebka (salt flats) 8 km. long and 4-5 km. wide. We established car for 4 weeks near a fishing settlement Sidi El Msid 2-3 km. from the mouth and made trips to Tan Tan at about weekly intervals to collect fuel, water and supplies. During the stay studies were made of the vegetation of the lagoon and invertebrates on which the waders feed, as well as the counts and ringing of waders and some passerines.

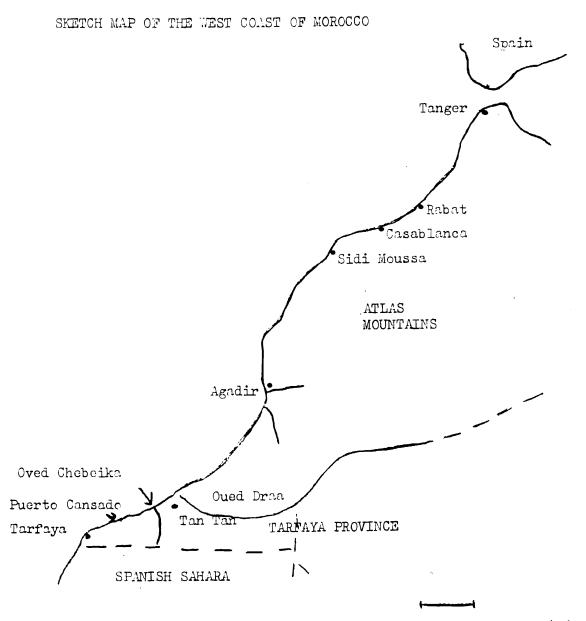
The wader population of Fuerto Cansado during our stay was estimated as a minim of 18,000 (this compares with about 100,000 estimated in January 1964 by Blondel), consisting mainly of Oystercatchers; Ringed, Kentish and Grey Plovers; Turnstone; Curlew; Whimbrel; Bar-tailed Gedwit; Redshank; Enot; Little Stint; Dunlin; Curlew Sandpiper and Sanderling. Avocets and Black-tailed Gedwits on rapid through passage were also noted. Several cannon-net catches were made, totalling about 600 waders - mainly Knot, Dunlin, Curlew Sandpiper with some Ringed Plover, Grey Plover, Turnston Bar-tailed Gedwit, Little Stint and Sanderling.

The data gathered by the expedition has not yet been analysed but several high-lights are noticeable. Several of these concerned moult including the finding of suspended moult in Kentish Flover and Dunlin following last year's extensive occurre in Ringed Plover. A Curlew Sandpiper cought twice at Puerto Cansado has also given some interesting information on the rate of its moult. During 15 days its moult scol had advanced from 30 to 49.

On the recovery side, apart from the 4 birds retrapped from the 1971 expedition and 8 birds caught twice this year, there were 5 controls among this year's birds: two Dunlin both ringed as juveniles in autumn 1971 from Kent and the Dee respectively and a third from Norway; and two Curlew Sandpipers which were ringed in Holland and Tunisia.

Recoveries are also beginning to come in from the birds ringed by the 1971 Expedition. These have included 3 juvenile Redshanks shot in Jan. Feb. and March 1972 in Morocco; 2 Dunlin shot in August 1972 in France and 1 Greenshank found dead in a musk-rat trap in May 1972 in Finland! With more than 3000 waders ringed by the 3 expeditions to Morocco in the last 2 years further recoveries can be looked forward to.

During our return a couple of days were spent at Point d'Arcay in France where a flock of 10,000 waders landed tantalizingly close to our cannon nets but unfortunately only 11 birds actually entered the catching area. However, French cooking and the hospitality of French wader ringers together with superb views of almost innumerable species of migrant birds of prey on the reserve made the visit as memorable as that of last year.



Approx. 100 miles (160 km)

The Use of Leg Colour as an Ageing Criterion in the Ruff

by David Pearson

I was interested to read Tony Pree's comments on the leg colour of Ruff wintering in South Africa. My own observations on the subject from Kenya, summarised below, show that this character cannot be used alone as an accurate ageing criterion, but nonethaless provides a useful age guide.

There is a change from a green/grey-green juvenile leg colour to an adult colour in the orange/vermillion/pink range. This is accomplished either by a steady progres sion through greenish-brown, brown and orange-brown, or via a mottled state in which areas of greenish grow smaller and areas of orange larger. The mottled state is more often apparent during the later stages of the transition. In Kenya, first year Ruff' can be separated from older birds on plumage until April. The characteristic golden-buff edgings of the juvenile median coverts and tertials are already worn and difficut to see by mid winter, but the edging of the innermost median coverts is retained until these feathers are replaced late in spring. Monthly numbers of female Ruff with various leg colours trapped at Lake Nakuru between October 1970 and September 1972 are given below. First year and older ('adult') birds are shown separately 'Brown' includes all variations in the greenish-brown to orange-brown transition range.

| | | | | Firs | t Yo | ar | | | | | | | | ' Adul | lts' | | | | |
|---------|---|----|----|------|------|----|---|----|----------------|---|----|-----|----|--------|------|-----|--------------|----|-----|
| | À | 3 | C | 7. | - | J | F | М | $\dot{\Delta}$ | M | Ţ | S | 0 | 7.7 | D | J | \mathbb{F} | M | 11 |
| GREEN | 1 | 9 | 10 | 13 | 24 | 54 | 3 | 11 | 5 | | | 5 | | | | | | - | |
| BROWN | _ | 3. | 1 | 4 | 6 | 17 | 3 | 13 | 13 | | 9 | 35 | 9 | 4 | 13 | 30 | 2 | 8 | 111 |
| MOTTLED | - | _ | 1 | - | 2 |), | 2 | 4 | 1 | | | 19 | | | | | | | |
| ORANGE | | ~ | | - | _ | | - | _ | | | 26 | 122 | 93 | 36 | 84 | 232 | 27 | 61 | 361 |

The majority of first year birds retain the juvenile leg colour until about January, but in some the transition has commenced as early as September. Most have either mettled or brownish legs by March and April, and a few have then reached an orange-brown or dull red colour close to the adult range. In older birds the proportion with other than orange legs decreases from over 30% in early autumn to about 10, in spring. Green-legged adults are occasionally trapped in autumn, but are virtually absent from December onwards. The tables suggest that the colour change commences at some time between the first autumn and the second autumn, and is usually completed during the second year.

Since first year birds have rarely been caught at Nakuru in subsequent years, retraps have provided little information on the leg colour of adults of known age. A few birds are certainly still completing the transition early in their third year. Of 36 retraps known to have been in their third year or older, all but three had completely orange legs. The exceptions, all August/September birds, were respectives orange with 5% greenish mottling, brown, and pink with 30% brown mottling. A very small number of adults perhaps never attain the normal orange colour; the last of the three retraps mentioned above was in fact at least fourth year. Nakuru retraps involving birds with transition leg colours are listed below. The complete change can evidently take more than twelve months.

| Ringed | Ad Ad Ad Ad Ad 1W Ad | 1.1.71 Brown 26.9.71 Mottled 24.1.71 Brown 31.12.70 Orange-brown 11.9.71 Mottled 23.5.71 Brown 2.1.71 Green 15.10.71 Brown 6.1.72 Orange | Retrapped | 3.4.72 8.4.72 19.8.72 2.9.72 16.9.72 | Mottled Orange Orange Orange Orange Mottled Orange Orange | |
|--------|--|--|-----------|--|--|--|
| | | 6.1./2 Orange 26.9.72 Greenish-brown | | | Orange Brown | |

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 crange. 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 tendancy 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 monthsm 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

| Place of Recov | Month of Recovery | | | | | | | | | | | | |
|-----------------|-------------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-------|
| | Jan | Feb | Mar | Apr | May | June | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| 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 ealier. 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 inmid-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 Pocls.

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"

| | Same Roost | Different Roost | $\underline{\mathtt{Total}}$ |
|---------------------|---------------|-----------------|------------------------------|
| Same Autumn | 3 | 4 | 7 |
| One autumn later | <u> </u> | 1 | 5 |
| Two autumns later | 1 | 1 | 2 |
| Three autumns later | 0 | 1 | 1 |
| | ************* | | |
| • | 8 | 7 | 15 |

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

| | Same Roost | Different Roost | Total |
|--------------------------|------------|-----------------|-------|
| 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 | A | 3 |
| | 13 | 8 | 21 |

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

| .There Ringed | When Ringed | | | | | | | | |
|-----------------|-------------|------|------------|--------------|--|--|--|--|--|
| | May | July | August | September | | | | | |
| Skanor, 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 exagerated 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 exagerated 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.

Acknowledgements

My thanks to the Merseyside Ringing Group for ringing the birds, and allowing me to use their data, and to R. Birch, R. Cockbain, P. Morgan and D. Okill for helpful comments.

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Wader Ringing in South Africa

During the last couple of years wader ringing in South Africa has progressed enormously. There is a small but keen group of ringers based on Cape Province, who have recently formed the Western Cape Wader Study Group. The ringing carried out in South Africa has already produced spectacular recoveries, in eastern Siberia, Britain and Belgium for example and as the number of birds ringed increases there will surely be more. However although recoveries are an important part of the information gained from handling birds, other aspects help to explain much about migration; therefore all birds are measured, weighed, examined for primary moult and the percentage of summer plumage recorded. In addition for as many birds as possible of the common species and for all of the rarer species, a full moult card is filled in.

Some of the recoveries to date are set out below:

Knot ringed 29.8.69, Zeebrugge, Belgium

2.1.72, Langebaan Lagoon (80 miles N. of Cape Town).

Curlew Sandpiper ringed 7.5.70, Klawervlei (nr Cape Town) x 3.9.71, nr Bulawayo, Rhodesia

Curlew Sandpiper ringed 24.9.69, Walvis Bay, Southwest Africa 30.9.71, Paarden Eiland, Cape Town

Sanderling ringed 14.3.71, Commetjie, Cape Town 15.5.71, Wash, England

The totals ringed are:

| _ | | 1970/71 | 1972/72 |
|--------------------|-------|---------|---------|
| Ringed Plover | | . 9 | 5 |
| Grey Plover | | 2 | 5 8 |
| Greater Sandplover | | _ | 2 |
| Turnstone | | 3 | 2 |
| Whimbrel | | . 2 | 3 |
| Bar-tailed Godwit | | - | 2 |
| Wood Sandpiper | | - | 7 |
| Common Sandpiper | | 7 | 2 |
| Greenshank 6 | | 10 | 18 |
| Marsh Sandpiper | | 1 | 15 |
| Terek Sandpiper | | 8 | 17 |
| Knot | | 16 | 173 |
| Little Stint | | 168 | 193 |
| Curlew Sandpiper | | 1425 | 1907 |
| Sanderling | | 56 | 122 |
| Ruff | | 5 | 70 |
| | Total | 1712 | 2546 |
| | | | |

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