WADER STUDY GROUP

Bulletin No 17 April 1976

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1976 Subscriptions

In order to keep pace with rising production and distribution costs we would be most grateful if anyone who has not paid (or cannot remember having done so) their 1976 subscription would do so.

The subscription for 1976 is still 50p and Ron Birch, 8 Thornberry Close, Saughall, Chester is waiting for it. If sending cheques or postal orders please make out to Wader Study Group (R. Birch).

Next Bulletin

Please let the editors have contributions by the end of June 1976. Ringing totals for March-June are also needed.

Joint editors are:

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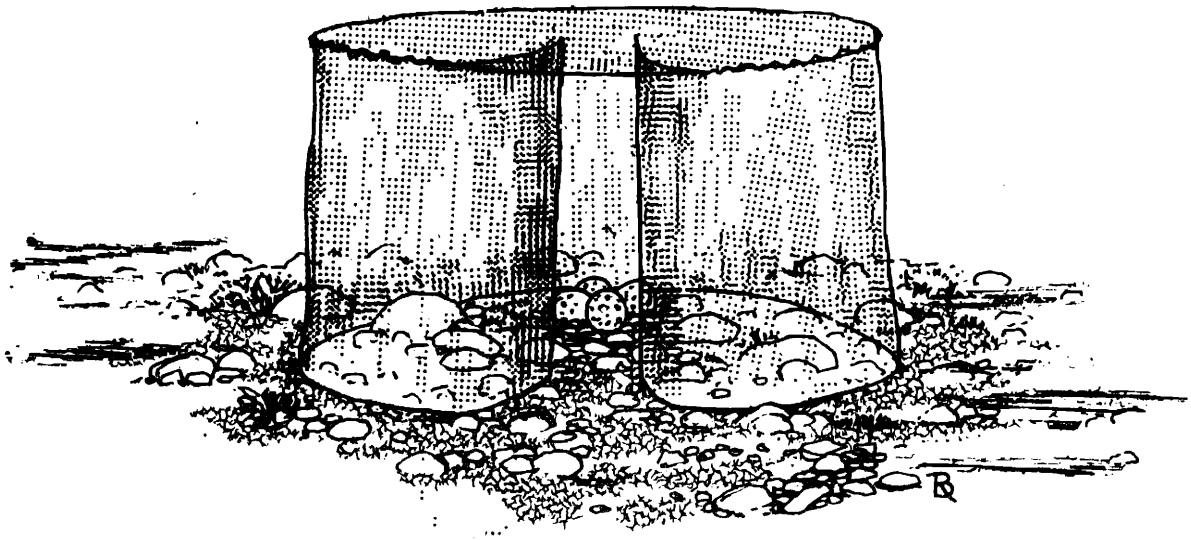

Fig 1

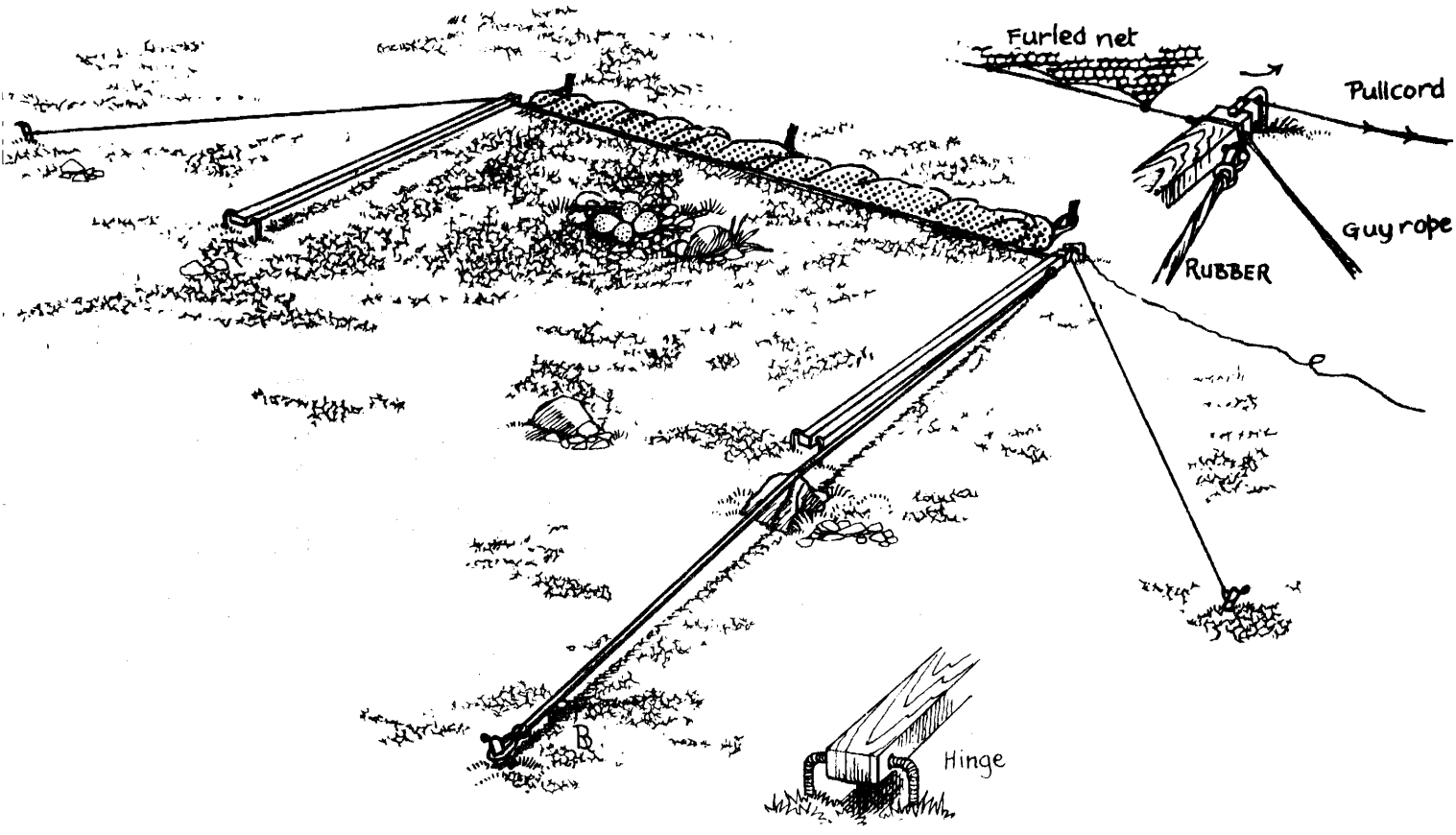

Fig 2

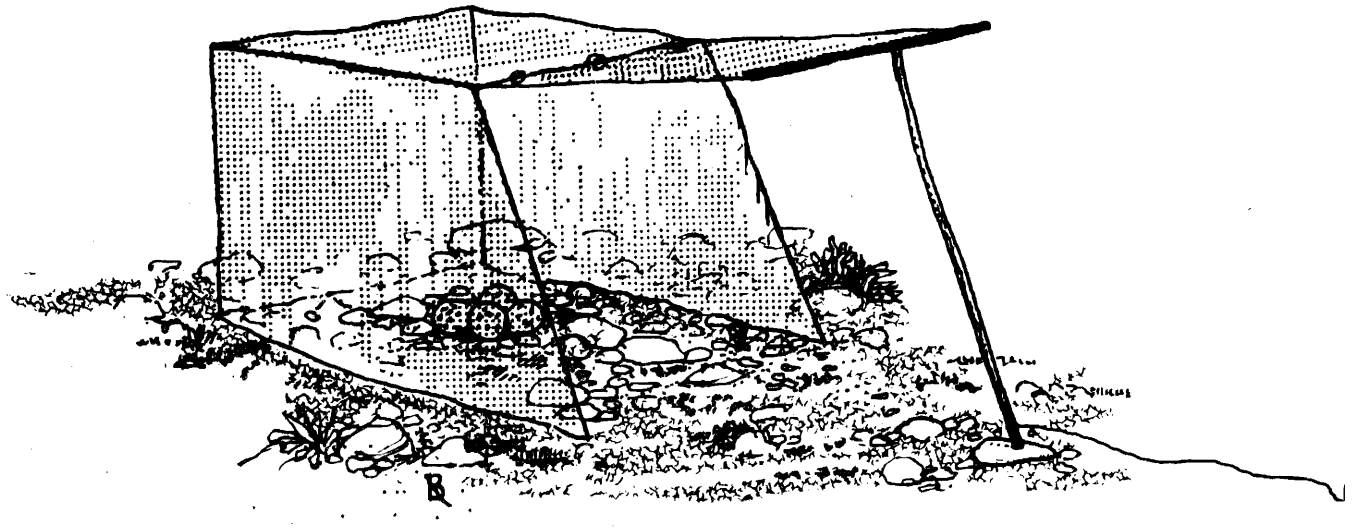

Fig 3

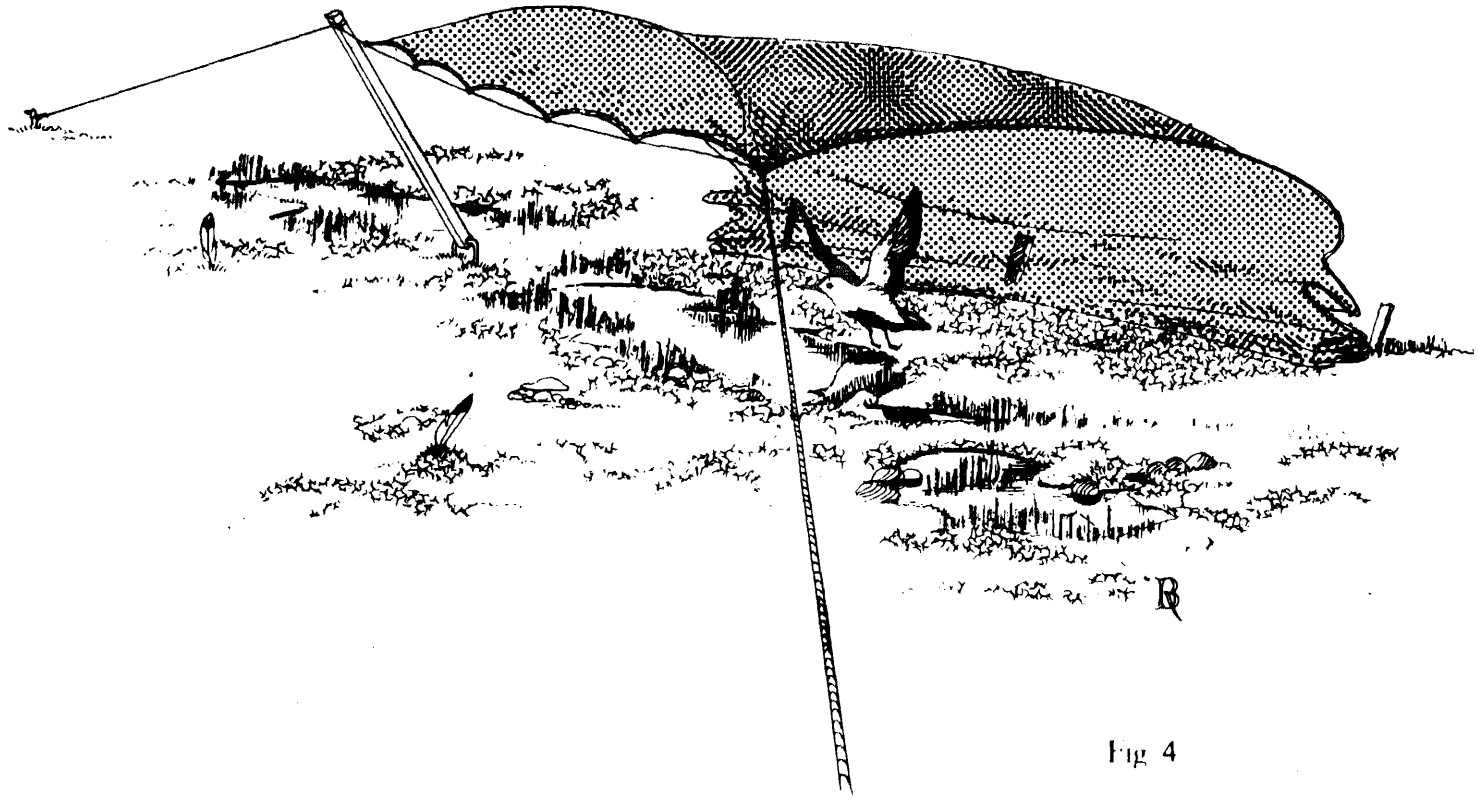

Fig 4

Recent Recoveries

Oystercatcher

FS 97858	Pull	25. 6.75	Bardsey Isl.	+	Vendee, France	27.12.75
FS 95819	Pull	30. 6 75	Canna, Inv.	+	Gironde, "	end 11.75
FS 52167	Pull	14. 6.75	Orkney	v	Dawlish, Devon	4.10.75
AT 96106	FG	2.12.62	Morecambe Bay	x	Faeroe Islands	30. 3.75
SS 15716	Ad	6.11.64	Dee	x	"	8. 6.75
SS 53528	Ad	7. 9.68	Bury Inlet	x	"	0. 4.75
FS 44464	Ad	7. 1 73	North Solway	x	"	0. 4.75
SS 88842	Juv	14.11.70	Wash	x	Finnmark,Norway	1. 5.75
SS 76997	Ad	25. 8.68	"	v	Rogaland, "	11. 6.75
FS 15544	Ad	27. 3.71	"	x	" "	1. 6.75
FS 29777	2Y	28. 5.72	"	x	" "	2. 6.75
FS 98677	Ad	3.11.74	"	x	" "	Summer 75
FS 75273	Ad	10. 3.74	North Solway	x	" "	16. 5.75
SS 95588	Ad	18. 1.69	Morecambe Bay	+	" "	23. 4.75
SS 97637	Ad	25.10.69	" "	x	More & Romsdal,Norway	15.7.75
SS 75294	J	4. 9.67	Wash	+	" "	25. 8. 75
FS 15779	A	12. 8.71	"	x	" " "	1. 8.75
FS 99544	Ad	21. 8.74	"	x	" " "	16. 6.75
FS 29374	1Y	17. 3.73	"	+	Vest Agder "	10.10.75
SS 94639	Ad	3.11.68	Morecambe Bay	x	Jutland,Denmark	14. 5.75
FS 98475	Ad	21. 8.74	Wash	v	Friesland,Netherlands	12.6.75
FS 54338	1Y	22. 8.74	"	+	Somme, France	8. 8.75
FV 08075	Ad	10. 8.75	Dee	x	Finistere "	13.11.75
SS 62293	Imm	21. 9.66	Conway	x	Shetland	7. 6.75
FS 26751	Ad	14. 3.72	Morecambe Bay	x	"	early 9.75
FS 66009	1Y	15.12.74	Dee	x	"	3. 6.75
SS 62882	Ad	19. 3.69	Bury Inlet	v	Wash	19. 3.69
				x	Orkney	30. 9.75
FS 08563	Ad	23.11.69	Morecambe Bay	v	" 28.5 and	1. 7.75

Lapwing

DS 83688	Pull	3. 7.74	Litton,York	x	Skelmersdale,Lancs	28.10.75

Grey Plover

DS 28939	1Y	8. 3.70	Wash	+	N.Kent Marshes	20.12.75

Turnstone

CE 21111	Juv	9. 9.75	Wash	x	Takoradi, Ghana	5.12.75

Snipe

DR 20022	Pull	20. 6.75	Alston,Cumb.	+	Portglenone,Antrim	1.11.75
CX 45282	FG	23. 9.64	Wisbech,Cambs	+	Jutland,Denmark	4.10.75
CP 51702	FG	2. 3.74	Chichester,Sx.	x	Sch./Holstein, FRG	2.11.75
CJ 22377	FG	12. 9.73	Bletchley,Bucks	+	Deux-Sevres, France	1975
CL 76972	PJ	23. 2.74	Dorset	+	Orne "	1.12.75

Snipe (Contd)

CH 46020	FG	7.10.73	Ripley, Surrey	+ Ribatejo, Portugal	29.12.75
XB 02750	FG	31.10.75	Holsworthy, Devon	+ Ennis, Clare	22.11.75
CE 01297	FG	26. 8.75	Coverty	+ Bedford	6.12.75

Curlew

SS 41968	Pull	30. 5.70	Corwen, Merioneth	+ Ennis, Clare	3.11.75
FS 45730	Pull	23. 6.73	Muirkirk, Ayr	x Moira, Down	9.12.75
SS 40490	FG	25. 8.68	Frampton, Glos.	x Turku & Pori,Finland	13. 8.75
SS 75982	PJ	15. 4.68	Wash	+ Jutland, Denmark	1. 8.75
3014412	FG	9. 9.64	Wellington, Salop	+ Frampton, Glos.	19.10.75
SS 52073	PJ	5.11.67	Dee	x Morecambe Bay	19.10.75
FS 10453	Juv	5. 6.71	Buckie, Banff	+ Ballydavid, Kerry	10.12.75
FS 45775	Ad	13. 4.74	Camel,Cornwall	x Taw, Devon	21.10.75

Green Sandpipers

BV 16718	Ad	13. 8.72	Cambridgeshire	+ Pas de Calais,France	28. 7.75
CH 46407	Juv	27. 8.73	Herne, Kent	+ " "	3. 8.75

Common Sandpiper

CC 43869	Juv	12. 7.72	Markinch, Fife	+ Loire Atlantique,France	27.8.75
BV 29769	Juv	25. 8.75	Orford, Suffolk	x Charente Maritime, "	26.9.75

Redshank

CX 49857	Pull	24. 5.75	Rockcliffe, Solway	v Kinsale, Cork	12.10.75
DS 26412	Pull	21. 5.75	Chalecote,Warwick	x R Stour, Essex	21.11.75
DR 25049	Ad	9. 6.75	Ribble Marshes	+ Charente Maritime,Fr.	6.12.75
DS 54584	Ad	11. 9.71	Humber	v Teesmouth	12.11.75
DS 90591	Ad	4. 9.71	Wash	x Pitsea, Thames	11.12.75
DS 90331	Ad	2. 8.73	"	x Dufftown, Banff	25.11.75
DS 64513	FG	4.10.75	Conway	v inner Clyde	1.12.75

Knot

CR 22985	Ad	28. 8.68	Morecambe Bay	v Ribble	30.11.75
CK 91429	Ad	8. 2.70	"	x Strangford Lough,Down	14.12.75
CC 87196	Ad	12. 8.72	Dee	x " "	1.12.75
CC 66873	Ad	12. 8.72	"	x Ribble	9.10.75
CE 05315	Ad	27.10.73	Wash	x "	18.10.75

Little Stint

BR 90619	Ad	13. 9.75	Cliffe, Kent	v Fawley, Southampton	6.11.75

Dunlin

CA 82513	FG	20.12.65	Morecambe Bay	v Pori, Finland	13. 7.75
BB 56199	Ad	27. 1.71	"	v " "	29. 7.75
BX 23409	1Y	29. 4.73	"	v " "	19. 7.75
BB 45022	Ad	1. 9.69	Humber	v " "	22. 7.75
BB 74986	1Y	15. 5.72	Dee	v " "	21. 7.75
BX 48953	Ad	20. 8.74	Wash	v " "	14. 7.75
BB 30501	Ad	13. 4.68	"	v " "	21. 7.75
				v L.Vattern, Sweden	25. 7.75
BX 58146	Ad	20. 8.74	"	v Mikoszewo, Poland	9. 8.75
BX 75510	Ad	24. 2.75	Portsmouth	v Rugen, DDR	4. 8.75
BP 21740	Ad	4. 2.74	Saltburn, Yorks	v Armager, Denmark	3. 8.75
BX 52155	Ad	26. 4.75	Magor, Gwent	v " "	27. 7.75
BJ 71241	PJ	5.12.71	Sheppey, Kent	v Friensian Isl. FRG	8.11.75
623674	Ad	14. 9.71	Beadnell, North	v Schiermoonikoog, Netherlands	7. 9.75
BB 89474	Ad	7. 2.74	Fawley,Southampton	v "	4. 9.75
BB 91554	Ad	20.11.71	Langstone Hbr	+ Somme, France	27.11.75
BX 58328	Ad	21. 8.74	Wash	+ Loire Atlantique,Fr.	end 9.75
BX 88270	Juv	9. 9.75	"	+ Finistere, France	Nov/Dec. 75
BX 89099	1Y	8.10.75	Shannon	+ Charente Maritime,Fr.	24.11.75
BX 34776	1Y	5. 5.74	Dee	x Algarve,Portugal	0. 8.75
BB 32580	Ad	12. 8.68	Wash	v Cork	24.11.75
BB 91044	Ad	30. 7.72	"	v "	24.11.75
BX 58202	Ad	20. 8.74	Wash	+ Youghall, Cork	30.11.75
BX 18471	Ad	31. 7.73	"	+ Shannon, Clare	mid 12.75
BX 48063	1Y	23. 7.74	"	x Strangford Lough,Down	1.12.75
BX 25553	Juv	14.10.73	North Solway	v Shannon	7.12.75
BX 67413	Ad	2. 3.75	Shannon	v Wash	11. 8.75
BX 76166	Ad	1.11.75	Eden estuary	v Teesmouth	16.12.75

There were nine other controls within Britain

Sanderling

BB 44672	Ad	31. 7.69	Wash	+ Beyin, Ghana	6.11.75
BX 49969	Ad	14. 9.74	"	+ Nord, France	12. 9.75

Ruff

DS 77563	FG	1.10.71	Orford, Suffolk	+ Friesland,Netherlands	3.11.75

Stone Curlew

EF 57516	Pull	19. 6.75	Royston, Herts	+ Oviedo, Spain	20.12.75

A SHORT NOTE ON REDSHANK IN THE UPPER CLYDE ESTUARY

by Peter Mackie

Since wader ringing commenced on the Clyde in January 1973, about 1150 Redshank have been ringed and of these about 670 have been processed. The data collected from these birds are summarised in this note. As far as the writer is aware, not too much published information is available on measurements of live Redshank, and this article is written with the intention of providing comparative data for other wader ringers interested in Redshank. Apart from one cannon-net catch in November 1973, all the birds were caught in mist nets, and processing was carried out in artificial light. All measurements were made using standard techniques: i.e. maximum chord for wing lengths, and bills from tip to feathering.

Wing length

The Clyde data are summarised below. No wing lengths are given for adults for the period July to October, when they are in active wing moult. For the other months, when difficulty was experienced in confidently ageing birds, the data has been combined to include all birds. This may affect the apparent pattern of changes in wing length throughout the year (but see below).

	MEAN (mm)	S.E. (mm)	RANGE	SAMPLE SIZE
November	167.9	0.3	151-179	247
December	166.1	0.7	153-177	55
January	168.0	1.0	155-178	24
February	169.5	0.6	157-179	55
March	167.9	0.7	158-176	45
April	168.5	0.5	157-178	78

The main arrival of juveniles appears to take place in late September/October, with 14.5% juveniles in August (sample size 76), 18.2% in September (sample size 22), and 49.3% in October (sample size 71). The mean wing length of October juveniles was 167.1 ± S.E. 1.1 mm (sample size 21), which relates well with the combined November figure of 167.9 ± S.E. 0.3 mm, and also with the Icelandic data below, indicating that the combination of adult and juvenile wing lengths may involve few problems in the present case.

The wing lengths indicate a population containing a large proportion of the Icelandic race T.t. robusta. Published data on this race include that of Pienkowski, Stanley & Morrison (1971) and Morrison (1972) who give wing lengths of 170 ± S.E. 0.7 mm for 4 adults and 167.6 ± S.E. 0.8 mm for 11 juveniles from Iceland. Hale (1971) gives skin measurements of 167.2 ± S.E. 1.0 mm for 13 males and 170.4 ± S.E. 0.8 mm for 16 females from Iceland. It is generally agreed that the Icelandic race T.t. robusta has a longer wing length than the nominate T.t. totanus and the British T.t. britannica. Hale (1971) considered that britannica is not a valid race but the name is retained here for ease of reference to the British breeding birds. The wintering population on the Clyde is considered to consist mainly of robusta with some britannica

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also present. Wing length histograms for those months where there is a reasonable sample size indicate consistent peaks at 164/165 mm and 172/173 mm with a broad peak at 168-170 mm. These may indicate the males and females of the two races present, with a britannica males mean at 164/165 mm, britannica females/robusta males in the band at 168-170 mm, and robusta females at 172/173 mm. Much larger samples are required to give a clearer picture. An estimate of the proportion of robusta has been calculated using the criteria suggested by Steventon (1972): proportion of robusta to britannica is given roughly by number of birds having wing length greater than 169 mm to number having wing length less than 161 mm. Boere (1973) also considers that any bird with a wing length of 168 mm or more is Icelandic. Using the method above gives:

MONTH	% robusta	SAMPLE SIZE
Nov	84.6	247
Dec	70.0	55
Jan	90.0	24
Feb	93.5	55
Mar	87.5	45
Apr	88.0	78

The slight drop in March/April, if real, is considered to be due to a small influx of britannica but we have no recoveries/controls to substantiate this. No explanation can be put forward at the moment for the drop in December.

Bill length

The mean bill length is given for each month. Little difference has been found between adults and juveniles, therefore the data covers all birds processed.

	MEAN (mm)	S.E. (mm)	RANGE	SAMPLE SIZE
August	41.5	0.2	37-46	77
September	42.0	0.3	39-47	23
October	41.3	0.2	38-45	73
November	41.4	0.1	37-47	247
December	41.3	0.2	37-46	55
January	40.4	0.4	36-43	24
February	40.7	0.3	37-45	55
March	40.3	0.3	37-44	45
April	41.3	0.2	35-45	78

No reason has so far been found for the lower values found in the period Jan-March, although it could be related to the state of the feathers at the base of the bill (see elsewhere in this bulletin). There is no significant concurrent increase or decrease in wing length during this period. The increase in bill length between March and April is significant ($t = 2.91$, P 0.01). Vaurie (1965) states that robusta is in general larger than totanus, britannica and eastern sub-species but that the eastern birds have a proportionately longer bill. Results from Morocco (totanus)(Pienkowski, 1972, 1975), and Arabia (eastern races?) (Etheridge 1971), indicate that in fact totanus and eastern races have significantly longer bills.

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	MEAN BILL LENGTH (mm)	SAMPLE SIZE
Morocco	43.7 ± S.E. 0.2	75
Arabia	45.5	11

It appears that britannica and robusta have fairly similar bill lengths and that a west to east clime of increasing bill length exists, as found for the western Palearctic by Hale (1971). With this situation then, bill lengths are not a major aid in separating the two wintering races in the Clyde.

Weight

Fig. 1. shows the mean weight for all birds except autumn juveniles plotted month by month.

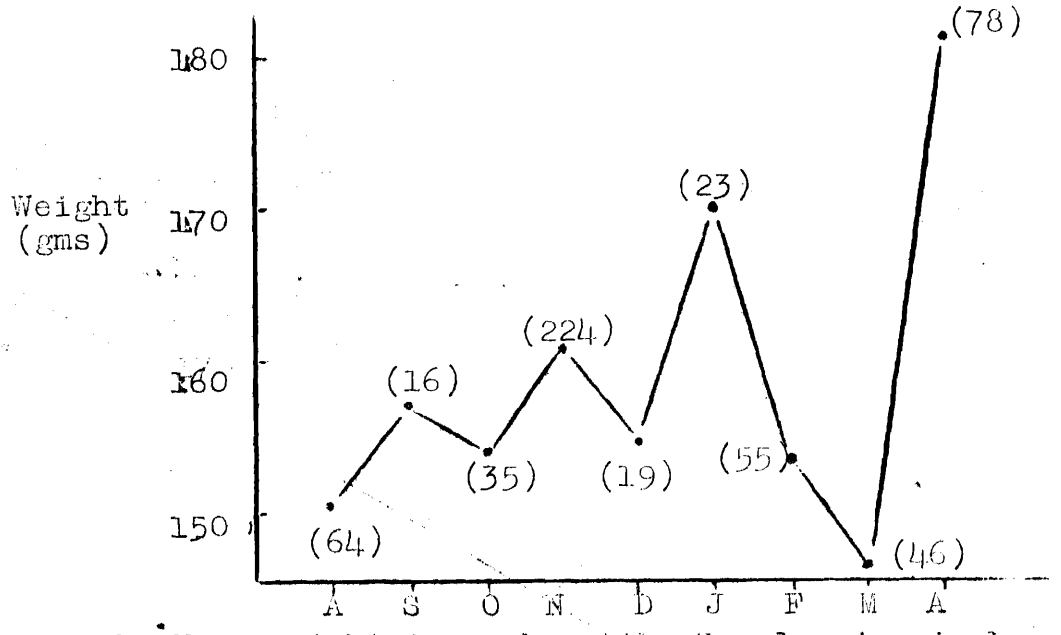

Fig 1. Mean weight in each month. Sample size in brackets.

The mean weight tends to rise in autumn and early winter followed by a late winter fall, as found for Redshank and other species at the Wash (Minton 1975). A dramatic increase in weight occurs in April with birds putting on 40-60 gms in about three weeks. The average weight at the beginning of April is about 150 gms and when the birds leave towards the end of the month, the average weight is almost 200 gms. Studies in Essex have shown a similar pattern with an average weight of 170 gms in January, and 210 gms in mid-April (A. Old in litt.). The April weight increase on the Wash is much lower (although based on a small sample) and this may indicate that Redshanks tend not to move directly from there to Iceland. Redshank numbers in the Clyde estuary drop from about 5,000 in the middle of April to about 100/200 at the end of the month. During this period of fat deposition birds spend noticeably longer periods feeding between high tides than during mid-winter. It is interesting to note that Prater and Wilson (1972) found a very similar departure weight in the Knot in Morecambe Bay. This species is similar in size and body weight to the Redshank and makes the same flight to Iceland.

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Moult

Since autumn 1974 all birds caught have been examined for moult and moult scores noted for all birds in active primary moult. Fig 2. gives details of moult scores for all birds caught plotted against the date. The mean rate of moult line was plotted by calculating the mean moult score on each date and fitting the best straight line through these. It appears from this that, for the birds caught at least, moult commences about the middle of July and finishes about the end of October, with some birds obviously earlier and later than these dates. Overall, this indicates a moult period of about 96 days. This agrees well with the 80-100 days found by Pienkowski et al. (in press, quoted by Pienkowski 1975), in Morocco for T.t. totanus.

Boere (1973), in a study on the Waddensee, found that T.t. totanus generally leaves the Waddensee at a moult score no higher than 30 and while still in active moult, presumably to finish moulting during passage and on arrival at the wintering area. T.t. robusta were found to start and finish their moult in the area. No such separation has been attempted so far with the Clyde data.

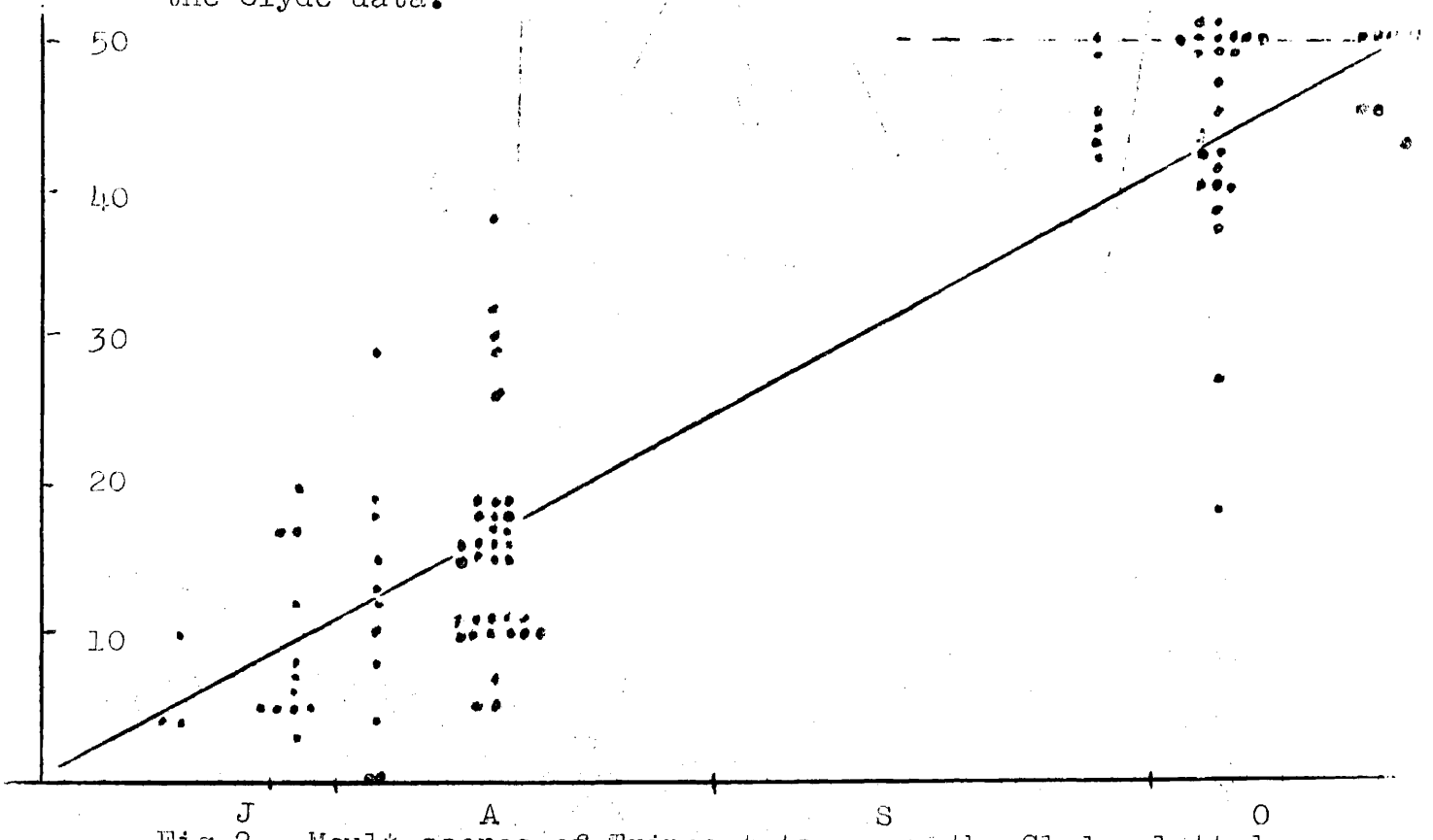

Fig 2. Moult scores of Tringa totanus on the Clyde plotted against date. Line indicates estimated mean rate of moult.

Recoveries/Controls/Retraps

So far there have been no recoveries outside the estuary, and only one control.

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Ringed	4.10.75	Conway, Caernarvon F.G.
Controlled	1.12.75	Dunbarton, Clyde.

This is a most puzzling control, showing a considerable northerly movement in late autumn/winter. There is no obvious explanation for this movement, especially when the following information on fidelity to wintering site is considered. Boere (1973) gave some evidence to show wintering site fidelity, so far retraps on the Clyde have given:

Retrapped one year after ringing	48
two years	11
three years	1

Indirect evidence for this fidelity also comes from our one cannon-net catch. In a catch of 753 Redshank there were no controls. This would indicate that the birds which winter on the Clyde tend not to visit other areas in the British Isles or continental Europe where a significant amount of wader ringing is carried out.

Acknowledgements

I would like to thank L. Gibson, H. Galbraith and T. Daniels for information on Redshank numbers and feeding habits in the Clyde, and for their enthusiastic help in ringing operations. A. Old kindly provided information on Redshank from Essex, and M. W. Pienkowski helped considerably to improve the first draft of this note. I would also like to thank J. G. Young and the North Solway Ringing Group for providing the equipment and personnel for our one cannon-net catch.

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Dr. P. Mackie, 5 Cawdor Crescent, Bishopton, Renfrewshire.

THE VALUE OF BILL LENGTHS OF MUSEUM SPECIMENS IN BIOMETRIC STUDIES

by Ron Summers

The measurement of bill, wing, or any other structure is a useful technique in the study of migration (Evans 1964). However, the technique is fraught with problems which make standardisation difficult. One of the difficulties is in the use of museum material. Standard bird text books give biometric data based on museum specimens but the application of these measurements to the field situation is problematical; e.g. it has been shown that wings of museum skins shrink (Vepsalainen 1968; Green & Williams 1973). Bill length however, is believed to be the least variable of the biometric measurements though the possibility that the bills of museum skins shrink has not been investigated.

I had the opportunity to measure a series of freshly collected birds and to compare them with skins from various South African museums (Cape Town, Pretoria, Durban, East London). Being at the tip of Africa it is likely that the birds of a given species are drawn from the same origin and that one does not experience such a complex situation as seen in Europe. One would therefore expect the mean bill lengths of the freshly collected birds and museum specimens to be the same. However, the table shows that in the two species investigated, Turnstone Arenaria interpres and Sanderling Caliadris alba, the museum birds tend to have lower bill lengths. In the Turnstone the difference amounts to 5.4% (males) and 4.4% (females) whilst in the Sanderling it is 1.6% (males) and 2.7% (females). These differences were highly significant in the Turnstone, but not in the Sanderling where the sample size is smaller (Table.). The explanation for the difference between the two species may lie partly in the structure of the bill, for in the Turnstone the rhamphotheca (the horny sheath) extends further beyond the bone point of the bill. The Sanderling on the other hand has a rounder tip to the bone around which the rhamphotheca fits more closely (Figure). Shrinkage of the rhamphotheca will therefore be limited by the bone.

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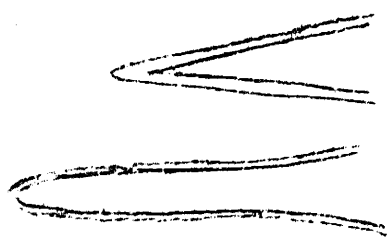
In conclusion, it appears that in the study of the biometrics of the Sanderling, and presumably other sandpipers, the problem of bill shrinkage in museum material will not be important when looking at gross differences but must be borne in mind when dealing with very small differences. However with the Turnstone, and perhaps other species, the bill lengths of museum specimens should not be used directly in biometric studies of live birds.

TABLE. Mean bill lengths of freshly collected and museum skins of Turnstone and Sanderlings from South Africa.

	Fresh			Museum			
	Mean	± SD	N	Mean	± SD	N	
Turnstone							
Male	22.1	± 0.8	29	20.9	± 0.9	18	(t = 4.83 p 0.001)
Female	22.6	± 0.8	26	21.6	± 1.0	35	(t = 4.43 p 0.001)
Sanderling							
Male	25.0	± 1.1	52	24.6	± 1.4	8	(t= 0.97 p 0.1)
Female	26.2	± 1.1	15	25.5	± 1.2	22	(t = 1.89 p 0.05)

FIGURE. Dorsal views of the bills of Turnstone and Sanderling showing the outlines of the bone and rhamphotheca.



Turnstone

Sanderling

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REQUEST FOR INFORMATION: weights of retrapped Ringed Plover chicks

Information is requested on the growth weights of Ringed Plover chicks from all parts of the British Isles (& elsewhere, if available) in any year. Any data on individual chicks weighed at least twice would be welcome. Please include dates of weighing (and hatching, if known), locality and any other relevant information. Records from single birds would be appreciated, as well as more abundant data.
M.W. Pienkowski, 5 Brockmill Cottages, Beal, Berwick-on-Tweed.

SEASONAL CHANGES IN BILL-LENGTHS OF KNOTS, AND A COMMENT ON BILL MEASURING TECHNIQUES FOR WADERS

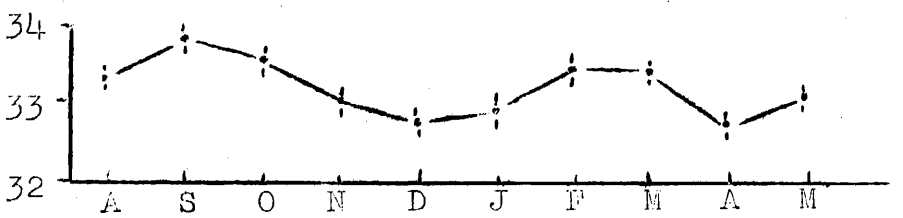
by Mike Pienkowski

The problem

Wing-lengths and bill lengths are the methods at present most used by ringers in order to attempt to separate wader populations. The difficulties in standardising wing measurements between different observers are notorious, and, even when this is overcome, there may be problems concerned with seasonal changes of wing-length in individual birds (Pienkowski & Minton 1973). The measurement of bill-lengths is possibly easier to standardise between observers, but little attention has been given to the possibility of seasonal changes in these, although White and Gittins (1964) subjectively considered seasonal changes in the bill shapes of Oystercatchers Haematopus ostralegus.

While attempting to separate Palaearctic and Nearctic Knot Calidris canutus populations on the basis of bill-lengths (to be published elsewhere), William Dick and I found that, in most areas, the mean bill-lengths of the Knots caught varied cyclically (Fig 1).

Fig 1 Monthly mean (I one standard error) bill lengths of adult Knots at the Wash.



It was clearly important to discoverif the variations were due to changes in the racial composition of the flocks or to changes in bill-lengths of individuals. Fortunately, a large number of retraps within the same year had been accumulated by the Wash Wader Ringing Group and these data show that the seasonal changes in the population means were due to variations in the bill-lengths of individuals during the year. (Elsewhere, Dick, Pienkowski, Waltner & Minton, in prep.), We have shown that the seasonal changes shown by retrap data are statistically significant.

We can suggest two possible explanations for a seasonal change in measured bill-length of an individual bird:

a) seasonal changes at the feather-margin at the base of the upper mandible associated with abrasion and moult; or
b) seasonal changes in the growth or wear (or, perhaps, the degree of compression) of the rhampotheca, perhaps related to feeding conditions.

.../

Effect b) has been suggested for some birds, especially passerines (e.g. Davis 1951, Stettenheim 1972). It could possibly occur in Oystercatchers (White & Gittins 1964) and Turnstones Arenaria interpres (see Summers 1976), both of which have rhampothecae extending well beyond the bone structure; but this is not the case in the Knot and many other waders (Dr P.J.K. Burton in litt.), and so cannot cause the variation described above. Changes in the feather margin are a more likely cause as the apparent bill lengthening coincides with wear and loss of feathers prior to autumn and spring body moults.

A possible solution?

If the bill length variation is due to changes at the feather margin, then it ought to be eliminated by measuring from a more prominent feature on the bill. One possibility is measuring from the nostril to the tip, and the rear of the nostril may be the best point to use as this would keep the measurement to be taken as large as possible. I tried this measurement on a number of waders caught at Teesmouth in November and December 1975, and some of the results are shown in Table 1.

Table 1. Comparison of bill lengths taken from feather margin to tip with those taken from rear of nostril to tip

	sample size	bill from feathers		bill from nostril		difference (mm)	correlation coefficient
		m*	v*	m*	v*		
Turnstone	23	22.7	1.57	20.7	1.04	2.0	0.933
Redshank	32	41.4	2.32	38.3	2.67	2.1	0.863
Dunlin	80	33.3	5.99	30.6	5.43	2.7	0.978

m* = mean; v* = variance

Not surprisingly, the two different types of bill measurements are well correlated for all three species, the mean measurement from the nostril being 2 to 3 mm shorter than that from the feather margin. It is also important to note that, at least for Redshanks and Dunlins, the variance has not been reduced by using the measurement from the nostril. This may indicate that taking the shorter measurement may not reduce the usefulness of bill-lengths for population separation.

It cannot yet be concluded whether or not the use of bill-lengths measured from the nostril will remove any cyclical effect, but I hope that this note will encourage ringers who catch waders - especially Knots - more regularly than I do to try this measurement. I should, however, stress that the bill-lengths from feathers should continue to be measured also; otherwise it would not be possible to make use of both old and new data.

.../

DAVIS, J. 1951. Seasonal changes in bill-lengths of certain passerine birds. Condor 56: 142-149.

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STETTENHEIM, P. 1972. The integument of birds. pp. 1-63 in Avian Biology Vol.2 (Ed. by D.S. Farner & J.R. King). Academic Press, London & New York.

SUMMERS, R. 1976. The value of museum specimens in biometric studies. Wader Study Group Bull. No 17:

WHITE, E. and J.C. GITTINS. 1964. The value of measurements in the study of wader migration, with particular reference to the Oystercatcher. Bird Study 11: 262-264.

DYED WADERS FROM AFRICA

The studies of the migration of waders in Africa are still in their infancy when compared with those in North Western Europe. This is partly due to the fact that wader enthusiasts are few and far between, the majority being found in Kenya and South Africa. Also waders are smallish birds and therefore do not lend themselves to high recovery rates, and it is significant that the majority of recoveries are made by other ringers. As a result, the recovery rates of African ringed waders is very low. We therefore know little about the migration routes through Africa and between the African and Palaearctic regions.

In an attempt to improve our understanding of the migration patterns of waders, large numbers of Knots, Sanderlings, and Curlew Sandpipers will be dye-marked in the Cape Province by the Western Cape Wader Study Group in early 1976 before the birds depart for their northward migration.

We appeal to all bird watchers to look out for these marked birds during the spring and autumn passage of 1976. If you do see a marked bird, which should be especially obvious in flight, please contact either: A.J. Prater, British Trust for Ornithology Beech Grove, Tring, England, or: Dr R.W. Summers, Percy FitzPatrick Institute of African Ornithology, University of Cape Town, South Africa, giving as many details as possible, including the colour of the dye and its position on the bird.

The scanty ringing evidence suggests that the migration routes of these 3 species may cross anywhere between western Europe and central Asia, so if you know a site where any of these species occur on spring (April-May) or autumn (August-October) passage, please keep a special lookout.

WSG winter meeting, January 1976

This was held during the Ringing and Migration Conference at Swanwick, Derbyshire. About 80 members attended and Dr. Minton chaired the discussion.

The business session was short with three principal reports.

.../

Secretary (A.J. Prater)

The membership has grown steadily through the year and at 31/12/75 244 persons were members, although 68 had not paid up by that date. A breakdown of members showed that 167 were from Britain, Ireland (12), Europe (40 , including 15 from the Netherlands), Africa (12), America (8) and Asia (5). This spread of participation and information was very encouraging and it was hoped it would continue.

In general data forms were being filled in by most groups.

Treasurer (R. Birch, who was unfortunately absent, had circulated the accounts for the year ending 31 December 1975)

WADER STUDY GROUP

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 1975

INCOME	£	p
Subscriptions. 176 members @ 50p	88	00
Sales (Ageing Guide)	0	90
Donations. IWRB for Bulletins for E. Europe.	10	00
Donations. WSG members outside UK.	2	40
Interest (Deposit Account @ 7%)	11	56
	112	86

EXPENDITURE	£	p
Stationery	20	75
Postage	44	38
Printing	5	00
Secretary's Expenses	2	00
	72	13
EXCESS OF INCOME OVER EXPENDITURE	40	73

BALANCE SHEET AS ON 31 DECEMBER 1975

ACCUMULATED FUND	£	p
Balance as on 31.12.75	74	83
Subscriptions paid in retrospect	27	00
Add.. Excess of income over expenditure	40	73
	142	56
ASSETS		
Balance at Bank	188	47
Deduct liabilities (subscriptions paid in advance)	45	91
	£ 142	56

.../

Although the balance was healthy it was unusually high due to 1) the research grants available last year were not taken up by members, 2) the large amount received as retrospective membership and 3) the IWRB donation. Compared with previous years it was higher as the money was kept in a deposit account.

There was a discussion on the subscription rate in view of the recent increases in postal charges. To send a bulletin (excluding cost of envelopes & paper etc) to Europe by air would cost 24p, and further afield either 24½p or 28p depending on weight. The 50p annual subscription would clearly not cover this cost. It was decided that as from 1st January 1977 the subscription should be increased to £1.00 per annum.

Editors (M. Pienkowski; A.J. Prater)

Reported that bulletins are often delayed while material is gathered and that prompt returns of ringing totals and analytical studies were needed.

After the reports Tony Prater reported on progress on the new ageing guide. He and John Marchant had almost completed the basic work and writing was well underway. The guide was expected to be in first complete draft by June 1976 and that the BTO would publish it. The contents would be sections on identification, ageing, sexing, geographical variation and biometrics. The 110 species of North America and the Palaearctic would be included in the guide.

There then followed three talks on studies of waders.

Keith Grant spoke about Greenshank, enlarging on the summary given at the summer meeting. He stressed the need for more data.

Chris Reynolds looked at the biometrics of Little Ringed Plovers and Jack Snipe, based on the data forms. He found plenty of fascinating trends but also stressed that much more data was needed to complete the picture.

William Dick considered in much greater depth than he had time to do last winter, the scientific results of the Mauritanian Expedition, in particular the data relating to the geographical populations of Knot and Dunlin, which occur in the Banc d'Arguin

WASH WADER RINGING GROUP REPORT 1973/74

The WWRG has now adapoted the policy of issuing reports every two years rather than annually. The present document reports the activities and progress over the two years as well as indicating the intended future work and publishing plans. As is usual in these reports, details are given of all ringed birds reported during the period, but additionally a summary of all known movements to and from the Wash reported to date is included, with recovery maps for all species.
During the period reported, the WWRG was deeply involved in the Feasibility Study for the Wash reservoirs proposal. Extracts from that report included in the present report concern movements of waders within the Wash & a presentation of the weight variations of the major study species during the year. This fills many of the gaps in the earlier paper in the 1971/72 report.
The report of approx. 100 pages is available from Dr C.D.T. Minton, 65 St John's Hill, Shenstone, Lichfield, Staffs. Price £1.25 + 25p postage.

RECENT PUBLICATIONS ON WADERS

See also abstracts in Ibis, Auk and Bird-Banding, and lists in IWRB Bulletin. Details of omissions to Mike Pienkowski, please.

AHLQUIST, J.E. 1974. Godwits, curlews and tringine sandpipers : new evidence challenges old classifications. *Discovery* 10 : 14-25.

BECUWE, M. "1973" (1975) Een gemengde slaapplaats van doortrekkende Limikolen in een "jagersput" te Woumen, West-Vlaanderen. *Gerfaut* 63 : 168.

BECUWE, M. 1975. (The estuary of the Ijzer at Nieuwpoort, Belgium, as a waterfowl reserve for migrating and wintering waders.) *Biol. Jb. Dodonaea* 43 : 63-77 (Flemish with English summary).

BROWN, R.A. & O'CONNOR, R.J. 1974. Some observations on the relationships between Oystercatchers *Haematopus ostralegus* L. and Cockles *Cardium edule* L. in Strangford Lough. *Irish Nat. J.* 18 : 73-80.

BURGER, J. & HOWE, M. 1975. Notes on winter feeding behaviour and molt in Wilson's Phalaropes. *Auk* 92 : 442-451.

DICK, W.J.A. (Ed.) 1976. Oxford and Cambridge Mauritanian Expedition 1973 Report. 79pp. £1.00 plus postage from W.J.A. Dick, 8 Magingley Road, Cambridge CB3 0EE.

DIMELOW, E. (Ed.) 1974? Merseyside Ringing Group 12th Ann. Rep. 1973. 21pp.

DIMELOW, E. (Ed.) 1975? Merseyside Ringing Group 13th Ann. Rep. 1974. 35pp. (Available from M.R.G. Secretary : R. Birch, 8 Thornberry Close, Saughall, Chester). Apart from the usual items, the 1974 Report contains notes on:
Weights of Dunlin retraps in May pp.17-19
Preliminary analysis of wader retraps on the Dee Estuary (N. Buxton) pp.23-24.
Icelandic Black-tailed Godwits (J.D. Okill) p. 25
Biometrics of Ringed Plover in spring (R.A. Eades) pp. 28-34.

DUHAUTOIS, L., CHARMOY, M.-C. & F., REYDAL, D. & TROTIGNON, J. 1974. Seconde prospection post-estivale au Banc d'Arguin (Mauritanie). *Alauda* 42 : 313-332.

ENGEL, A. & SCHMITT, P. 1975. Etude d'une population de Courlis centres en Alsace. *Alauda* 43 : 295-302.

EVANS, P.R. 1975. Moult of Red-necked Stints at Westernport Bay, Victoria. *Emu* 715 : 227-229.

EVANS, P.R. & SMITH, P.C. 1975. Studies of shorebirds at Lindisfarne, Northumberland. 2. Fat and pectoral muscle as indicators of body condition in the Bar-tailed Godwit. *Wildfowl* 26 : 64-76.

FOLKESTAD, A.O. 1975. Wetland bird migration in Central Norway. *Ornis Fenn.* 52 : 49-56.

FUCHS, E. 1975. Observations sur les resources alimentaires et l'alimentation des Becasseaux variable, minute et cocorli *Calidris alpina, minuta* et *ferruginea* en Mediterranee, au passage et pendant l'hivernage. *Alauda* 43 : 55-69.

GLUTZ von BLOTZHEIM, U.N., BAUER, K.M. & BEZZEL, E. (Eds.) 1975. *Handbuch der Vogel Mitteleuropas. Band 6. Charadriiformes (I. Teil).* Akademische Verlagsgesellschaft, Weisbaden. 840 pp. Very comprehensive review incorporating material published upto end of 1974 and some 1975 and unpublished. Covers Oystercatchers, Plovers, Calidrine sandpipers, *Limicola, Tryngites* and *Philomachus*. (Band 7, covering the second part of Charadriiformes, will include literature upto end of 1975). For some species the migration and population aspects of this handbook are more upto date than their supporting literature which, in view of current journal delays, may take some time to catch up!

GORANSSON, G., KARLSSON, J., NILSSON, S.G. & ULFSTRAND, S. 1975. Predation on birds' nests in relation to antipredator aggression and nest density: an experimental study. *Oikos* 26 : 117-120.

GRAUL, W.D. 1974. Adaptive aspects of the Mountain Plover social system. *Living Bird* 12 : 69-94.

GRAUL, W.D. 1975. Breeding biology of the Mountain Plover. *Wilson Bull.* 87 : 6-31.

GROSSKOPF, G. 1974. Ringfunde des Rotschenkels *(Tringa totanus)*. *Auspicium* 4 : 311-323.

HIGGINS, K.F. & KIRSCH. L.M. 1975. Some aspects of the breeding biology of the Upland Sandpipers in North Dakota. *Wilson Bull.* 87 : 96-102.

HILDEN, O. 1975. Breeding system of Temminck's Stint *Calidris temminckii*. *Ornis Fenn.* 52 : 117-146.

HOLZINGER, J. 1974. Zur Frage der nachtlichen Brutablosung beim Flussregenpfeifer *Charadrius dubius*. *J. Orn.* 115 : 46 -6.

HOWE, M.A. 1975. Behavioral aspects of the pair bond in Wilson's Phalarope. *Wilson Bull.* 87 : 248-270.

I.W.R.B. Bulletin No. 39/40 (July/Dec 1975) includes counts of waders in western Mediterranean area, Iraq, United Arab Emirates, Pakistan.

JACKSON, R & J. 1975. A study of breeding Lapwings in the New Forest, Hampshire 1971-74. *Ringing & Migration* 1 : 18-27.

KITTLE, J. 1975. Weights and moult of Green Sandpipers in Britain. *Ringing & Migration* 1 : 52-55.

KNIGHT, P.J. & DICK, W.J.A. 1975. Recensement de limicoles au Banc d'Arguin (Mauritanie). *Alauda* 43 : 363-385.

KORTE, J. DE 1975. Golden Plover *Pluvialis apricaria* breeding in Jameson Land, East Greenland. *Dansk Orn. Foren. Tidskr.* 69 : 129-134.

LOUETTE, M. "1973" (1975). Ornithological observations near fresh- and brackish water in Morocco during summer 1971. *Gerfaut* 63 : 121-132.

MELTOFTE, H. 1975. Ornithological observations in northeast Greenland between 76°00'N and 78°00'N lat. 1969-71. *Medd. om Gronland* 191(9) : 1-72.

MINTON, C.D.T. (Ed.) 1975. Wash Wader Ringing Group Report 1973/4. Approx 100 pp. £1.25 plus 25p postage from Dr C.D. Minton, 65 St. John's Hill, Shenstone, Lichfield, Staffs.

MØLLER, H.S. 1975. Danish salt-marsh communities of breeding birds in relation to different types of management. *Ornis Scand.* 6 : 125-133.

NIELSEN, B.P. 1975. Affinities of *Eudromias morinellus* (L) to the genus *Charadrius* L. *Ornis Scand.* 6 : 65-82.

NYHOLM, E.S. 1970. Ornithological observations on Bear Island 1967. *Astarte* 4 : 37-39.

OLIVER, D. (Ed.) 1975? Tay Ringing Group Report 1974. 27pp. 20p from the editor at East Cottage, Ballas, nr. Cupar, Fife. Includes:-
Aspects of Turnstone ecology in Scotland. (R. Summers, N. Atkinson & M. Nicoll) pp 3-10.
Sanderlings in the Firth of Tay (R. Summers) pp. 12-14.

OWEN, R.B. & MORGAN, J.W. 1975. Summer behaviour of adult radio-equipped Woodcock in central Maine. *J. Wildl. Manage* 39 : 179-182.

PIENKOWSKI, M.W. & DICK, W.J.A. 1975. The migration and wintering of Dunlin *Calidris alpina* in north-west Africa. *Ornis Scand.* 6 : 151-167.

PRATER, A.J. 1973. The 1972 midwinter census of waders in Scotland. *Scot. Birds* 7 : 391-398.

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RAPPE, A. "1973" (1975) Notes sur le passage des limicoles le long de la cote belge. *Gerfaut 63* : 133-147.

REISER, K.-H. 1971. Sandregenpfeifer (*Charadrius hiaticula*) - Ringfunde. *Auspicium* 4 : 241-251.

RIDDIFORD, N. & TURLEY, R.E. 1975. Greenshank taking fish. *Br. Birds* 68 : 467.

SAFRIEL, U.N. 1975. On the significance of clutch size in nidifugous birds. *Ecology* 56 : 703-708.

SCHLENKER, R. 1975. Ringefunde des Zwergstrandlaufers *(Calidris minuta)*. *Auspicium* 6 : 99-103.

SEEGER, J.J. 1974. The status of the most important resting places for waders in the GDR. pp 32-36 in Prater, A.J. (Ed.) *Proc. IWRB Wader Symposium, Warsaw, 1973.* Warszawa (omitted from list in previous bulletin).

SHARROCK, J.T.R. & the Rare Breeding Birds Panel 1975. Rare breeding birds in the United Kingdom. *Br. Birds* 68 : 489-506.

SMITH, A.E. 1975. The impacts of lowland river management. *Bird Study* 22 : 249-254.

THOMPSON, M.C. 1974. Migratory patterns of Ruddy Turnstones in the Central Pacific Region. *Living Bird* 12 : 5-23.

TOLCHIN, V. & MELNIKOV, U. 1974. (Breeding and ecology of the Black-tailed Godwit in eastern Siberia). *Biol. nauki* 1974 (11) : 27-30 (In Russian).

ULFSTRAND, S., ROOS, G., ALERSTAM, T. & OSTERDAHL, L. (Eds.) 1974. Visible migration at Falsterbo, Sweden. *Var Fagelvarld* Suppl. 8 66 SKr.

Addresses

New members

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Elliot, R.D.	Dept. Biology, Acadia University, Wolfville, Nova Scotia, Canada.
Exo, M.	435 Reckinghausen, Eifelstrasser 27, W. Germany.
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Foster, R.	Adare Manor Estate, Adare, Co. Limerick.
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Swann, R.	Torbeck, Lewiston, Drumnadrochit, Inverness.
Vandenbulke, P.	Bossuytlaan 78, 8320 Assebrock, Belgium.
Vizozo-Shorten, Mrs M.	East Gate, Old Castle Road, Salisbury, Wilts.

Changes

Corris, W.	Musical Emporium, 6 Wine Street, Llantwit Major. S. Glamorgan.
GIBSON, I.	Arcadia, The Glen, Howwood, Renfrewshire.
Goodyer, L.	174A Heath End Road, Nuneaton, Warks CV10 7JH.
Irving, P.	88 Gillott Road, Edgebaston, Birmingham B16 0LS
Marsh, P.	Grafham Water Residential Centre, West Perry, Huntingdon, Cambs.
Mainwood, T.	4 Ben Bhraggie Drive, Golspie, Sutherland.
Meltofte, H.	Mollegade 23, 3 tr., 22-00 Copenhagen N, Denmark.
Moller, H.S.	Gronjordskoll, 2820 DK 2300, Copenhagen, Denmark.
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Parkinson, J.	2 Farm Drive, Connah's Quay, Clwyd.
Peart, R.H.	56 West Street, Fontmell Magna, Shaftesbury, Dorset SP7 OPE.
Petersen, A.	Edward Grey Institute, South Parks Road, Oxford.
Prater, A.J.	3 The Hollies, Wigginton, Tring, Herts.
Pratley, P.	The Black Cabin, Castle Rising, Kings Lynn, Norfolk PE31 6BE.
Swelm, N. van	Herenstraat 21, Rijswijk -ZH-, Netherlands.
Wilson, James	Flat 52D, Carnegie Court, Hillhead Flats, Aberdeen.

METHODS OF CATCHING AND STUDYING BREEDING WADERS - AN ADDENDUM

G.H. Green and P.N. Ferns, illustrated by R.M. Bishop

Since writing on this subject in Wader Study Group Bulletin No 16 we have received a number of enquiries about trapping methods. We are therefore publishing here several drawings (by R.M. Bishop), which are eventually destined for the report of the Joint Biological Expedition to NE Greenland 1974, of traps used successfully in Greenland.

Fig 1 shows a heart shaped cage trap - size about 40-50 cm diameter - set over a nest.

Fig 2 shows an elastic powered clap net (developed by G.P. Mudge) which was also very successful. Some experimentation may be required to find the best point of attachment of elastic to pole to give fastest operation when the net is released. The net measures 100-150 cm square.

Fig 3 shows a simple manually operated frop-door trap measuring about 40 x 40 x 60 cm.

Fig 4 shows a single pole clap net. This type can be used for trapping at the nest but is less satisfactory than the three other traps. Measures about 2 x 1 m.

It must be re-emphasised (see previous note) that trapping at the nest should only be attempted after incubation has become established and that each catching attempt should last only about 15 minutes. If it fails give up and try again later perhaps using a different method. Catching should not be attempted in cold wet weather.

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