WADER STUDY GROUP

Bulletin No 18 August 1976

CONTENTS

WSG SUMMER MEETING. This meeting for group representatives and individuals will take place on Sunday October 3rd 1976 at Clive Minton's house, Shenstone.

NEXT BULLETIN. Please let the editors have contributions by the end of October 1976. Ringing totals for the period July-September are also needed. The joint editors are Tony Prater, BTO, Beech Grove, Tring, Herts and Mike Pienkowski, 5 Brockmill Cottages, Beal, Berwick-on-Tweed, Northumberland and as from 1st October his new address will be 10 West Fenton Cottages, North Berwick, East Lothian.

RINGING TOTALS. Once again there has been a dismal response from ringing groups. The three who have responded are:-
Shannon Wader Ringing Group who in 1975 ringed 773 birds including 536 Dunlin and 201 Curlew.
S.H. Sporne (Hampshire) who ringed 343 birds, including 333 Dunlin during 1975.
Celtic Wader Research Group (S. Wales) who ringed 496 waders during spring 1976 including 441 Dunlin and 30 Whimbrel.

ADDRESSES

New

Bie, S. de	Kasteleulaan 117, Roden, Netherlands.
Clinning, P.	Private Bag 5023, Walvis Bay 9190, Southwest Africa.
Wilson, John.	Forest and Wildlife Service, Research Branch, Sidmonton Place, Bray, Co Wicklow, Ireland.

Changes

Cook, M.J.H.	Rowantreee, Clochan, Buckie, Banffshire.
Dick, Dr J.A.	62 Cumberland Street, London SW1V 4LZ.
Knight, Dr P.J.	Dept of Biology, John Hopkins University, Baltimore, Maryland 21218, U.S.A.
Tucker, J.J.	c/o 40 Priory Crescent, Portsmouth, PO4 8RN.
Wiersema, G.	Boslaan 10, Emmeloord, Netherlands.

RECENT RECOVERIES

Oystercatcher

AT 93803	Pull	6.6.74	Mull, Argyll	+ Minho, Portugal	0.12.74
[illegible] 70695	Pull	23.7.75	Fair Isle	x Morecambe Bay	17. 1.76
FV 11306	Pull	16.6.75	Skokholm	x Braunton, Devon	7. 2.76
FS 94872	Pull	15.7.75	Skokholm	v Ballycotton, Cork	22. 3.76
SS 76020	IS	29.6.68	Wash	x More og Romsdal, Norway	5. 4.76
SS 76855	2Y	29.7.68	"	x Nordland, Norway	1. 5.76
FS 15122	1Y	30.1.71	"	x Rogaland, "	19. 4.76
FS 29558	Ad	1.8.73	"	x Vest Agder, "	20. 4.76
FS 98190	Ad	18.8.74	"	+ Nordland, "	26. 4.76
SS 75095	Ad	19.8.67	"	x Friesland, Netherlands	7. 2.76
SS 88240	Ad	18.7.70	"	x Vlieland, "	8. 1.76
SS 88665	Ad	19.7.70	"	x Noord Holland, "	21. 2.76
FS 15539	Ad	27.3.71	"	x Ameland, "	mid 2.76
3104752	FG	4.12.71	Swale	x Noord Holland, "	(20. 3.76)
FV 04948	Ad	8.10.75	Wash	v West Flanders,Belgium	2. 3.76
FS 54338	2Y	22. 8.74	"	+ Somme, France	8. 8.75
SS 38999	Ad	17. 8.66	Bury Inlet	x Orkney	28. 4.75
SS 97800	Ad	25.10.69	Morecambe Bay	x "	31. 3.76
FS 56144	Juv	1. 9.73	Clonakilty, Cork	x Huntly, Aberdeen	25. 4.76

Lapwing

2072558	Pull	26. 5.73	Henley, Oxford	+ Manche, France	4. 2.76
DA 19104	Pull	22. 6.74	Kings Lynn, Norfolk	+ " "	1. 2.76
DR 08067	Pull	19. 5.74	Harrogate, Yorks	+ Gironde, "	25. 1.76
DS 00350	Pull	21. 6.63	" "	x Newbridge, Co.Kildare	20. 3.76
P 13006	Pull	22. 5.60	Kettlewell, "	x Kilkeel, Co. Down	2. 2.76
DS 81434	Pull	25. 6.72	Aberdeen	+ Athlone, Co. Westmeath	18. 1.76
DR 12729	Pull	2. 7.73	Sullom, Shetland	x Hartlepool, Durham	15. 4.76
DS 95037	FG	31.12.70	Farlington, Hants	? Bihac, Yugoslavia	15. 3.76
DR 1920Y	1Y	14.10.75	Droitwich, Worcs	x Baranya, Hungary	9. 3.76
DS 74660	Ad	9. 3.73	Frampton, Glos.	x Koln, W. Bermany	13. 4.76

Ringed Plover

BB 54705	Juv	12. 8.73	Kings Lynn, Norfolk	? St Louis, Senegal	20. 3.76
BV 28445	Ad	26.11.75	Wembury, Devon	x Rostock, DDR	10. 3.76
BB 79263	Ad	29. 5.71	Morecambe Bay	+ Somme, France	14. 8.74
BY 34427	1YF	5. 5.74	Dee	x Cadiz, Spain	3.11.74

Grey Plover

DS 95062	1Y	1.11.75	Wash	+ Oued Souss, Morocco	7. 1.76

Turnstone

CC 88696	Ad	28. 8.72	Wash	v Ellesmere Island,Canada	3. 6.75
				v Wash	4. 1.76
CE 04063	Ad	17. 8.74	Wash	+ Manche, France	0. 9.74
CR 47998	PJ	5. 5.70	Bardsea Isl., Caerns	x Finistere, "	23. 4.76

Snipe

DR 05317	Ad	5. 2.73	Farlington, Hants	+ Leningrad, USSR	0. 9.75
CH 44491	FG	3.11.73	Wigan, Lancs.	+ " "	20. 9.75
CP 69749	PJ	26. 9.69	Sevenoaks, Kent	+ Deux-Sevres, France	7. 2.76
XA 22919	FG	12.10.75	" "	+ Somme "	11.11.75
CC 60009	FG	2.10.71	Wigan, Lancs	+ Coruna, Spain	18. 1.76
CC 91756	Ad	5.11.73	Huddersfield,Yorks	+ Cadiz, "	12.12.74
CJ 53653	Ad	26. 3.73	Ipswich, Suffolk	+ Rabat, Morocco	28. 2.76

Curlew

SS 89465	FG	11. 3.69	Fife Ness, Fife	x Nord-Trondelag, Norway	3. 5.76
SS 88773	Ad	18. 8.70	Wash	x Rye, Sussex	10. 2.76
FS 27504	FG	13. 3.72	Ruyton, Salop	x Milford Haven, Pembs.	16. 1.76
FS 35529	Ad	9. 8.74	Shannon estuary	x Ludlow, Salop	8.4.76

Bar-tailed Godwit

DS 46083	Ad	20. 4.69	Humber	+ Manche, France	0. 9.74

Common Sandpiper

BB 26712	Juv	4. 8.70	Low Hauxley, Northumb.	X Nador, Morocco	14. 4.76

Redshank

DA 05939	Pull	15. 6.75	Rothbury, Northumb.	x Groningen, Netherlands	5. 2.76
DA 19442	Pull	24. 6.75	Castletown, Caithness	+ Manche, France	9. 3.76
DR 05047	Ad	1. 1.72	Wash	v Reykjavik, Iceland	
				v Wash	4. 1.76
DS 32123	Juv	9. 9.75	Wash	x Preston, Lancs	20. 3.76
DS 19106	Ad	28. 8.75	Dawlish, Devon	x New Galloway, Kirkcud.	10. 4.76
DS [illegible]	FG	4.10.75	Conway	x Settle, Yorks	10. 5.76
DR 32114	Ad	9. 9.75	Wash	x Zuid Holland,Netherlands	3. 2.76
CK 50503	Ad	25. 1.70	Dartford, Kent	v Queen Mary Reservoir	23.12.76 & 7. 2.76
DS 66807	Ad	17. 8.74	Wash	v Belfast	30. 1.76
DS 91426	Ad	16.12.75	Teesmouth	x Eyemouth, Berwick	12. 1.76
DR 03316	Juv	7. 8.75	Carnoustie, Angus	+ Wash	4. 9.75

Spotted Redshank

DR 28543	1S	27. 7.75	Wash	+ El Jadida, Morocco	25. 3.76

Knot

CC 90761	Ad	31. 7.73	Wash	v Laugebaan, South Africa	23.12.73
CR 36801	PJ	26.10.68	Dee	+ Somme, France	4. 1.76
CC 89336	Ad	8.10.72	Wash	+ Ille et Vilaine, France	22. 2.74
CK 97553	Ad	8. 9.70	Fair Isle	v Wash	6.12.75
CE 19783	Ad	10. 9.75	Wash	v Morecambe Bay	28. 2.76

Knot (Contd)

In addition subsequent winter movements were recorded between the Solway and the Wash (3), Morecambe Bay (2) and Dee (1) and one between the Dee and Morecambe Bay.

Dunlin

BX 44633	Juv	11.10.74	Orford, Suffolk	? Kalinin, USSR	19. 7.75
631850	1Y	4.11.61	Swale	x Jylland, Denmark	16. 4.76
BB 77505	Ad	9. 8.71	Wash	x " "	9. 9.75
BB 88112	Ad	6. 1.74	Dartford	x " "	24. 2.76
BX 13361	Ad	1.12.74	Portsmouth	x " "	24. 4.76
BX 92471	1Y	31. 1.76	Wash	v Friesland, Netherlands	18. 2.76
BB 21691	Juv	12. 9.67	"	+ Gironde, France	30.11.74
BE 84293	Ad	6.11.69	Medway	+ Pas de Calais, France	18.10.75
BB 78230	Ad	9. 8.71	Wash	+ Manche, France	17.11.74
BB 89451	Ad	30. 7.73	Southampton	+ Manche, France	ant 74
BX 17847	Ad	31. 7.73	Wash	+ Charante Maritime,France	22. 3.75
BX 35227	Ad	31. 7.73	"	+ Morbihan, France	2. 2.76
BR 13683	Ad	26. 1.74	Swale	+ Somme, "	3. 3.74
BX 36742	1S	20. 7.74	Wash	+ Manche "	17. 3.75
BX 01546	Ad	26. 4.75	Magor, Gwent	+ Cotes du Nord, "	4. 1.76
BX 50071	1Y	31.10.75	Butley, Suffolk	v Manche, "	7. 3.76
BH 87492	Ad	30. 8.69	Wash	+ Setubal, Portugal	26.10.75
BB 77523	Ad	9. 8.71	"	+ Cadiz, Spain	15.11.74
BX 64456	Ad	10. 8.75	"	v Draycote Res., Warwk.	1. 2.76
BX 65657	Ad	10. 8.75	"	v " "	8. 2.76
BP 39660	Ad	30. 8.75	Rye, Sussex	v Plym, Devon	23. 1.76
BX 92509	Juv	6.12.75	Wash	v Alt, Lancs.	5. 2.76
BX 46010	Ad	13. 4.75	N Solway	v Belfast	30. 1.76
BX 55420	Ad	30. 8.75	Humber	x St Helens, Lancs.	14. 4.76
BX 65053	Ad	10. 8.75	Wash	v Magor, Gwent	1. 5. 76

There were also 6 subsequent winter inter-Britain movements.

Sanderling

BB 91089	Ad	12. 8.72	Wash	+ Somme, France	26. 9.74

Ruff

DS 94458	1Ym	19. 8.74	Durham	+ Matera, Italy	25. 3.75

AGEING AND SEXING OF LAPWINGS (Vanellus vanellus)

by Mark Fletcher

From an examination of Lapwings that have been killed in 'bird strike' incidents involving aircraft, it has been found possible to age and sex birds from their plumage.

As reported in the Handbook of British Birds (Witherby et al. 1940), by examining the wing formula and particularly the relative position of the tenth (outermost large) - to the other primaries, adults males and juvenile females can be distinguished. Using this method adult females and juvenile males cannot be differentiated.

In the adult male the tenth primary (the eleventh being small) is equal to between the fourth and fifth primary (rarely fifth or between fourth and third). With the juvenile female the tenth primary is equal to between the eigth and ninth (rarely eight and seventh) and always shorter than the seventh. The adult female and juvenile male both have tenth primaries equal to between the sixth and seventh, always greater than the seventh.

By examination of the tail it is possible to distinguish adults and juveniles. The adult tail is tipped light buff or white, and the outer pair of feathers are white with an irregular black mark towards the tip. With the juvenile the tail is tipped buff with no white and the outer pair of feathers are entirely white or occasionally lightly marked black. This black when present covers a very small area towards one edge of the feathers, any substantial black indicating an adult tail. The buff or white tips to the tail feathers are soon abraded and this characteristic cannot be safely used after October. Occasionally an odd tail feather is moulted between July and December in the juven le. An examination of both outer tail feathers is therefore necessary. One bird (a juvenile female from the wing formula) had an apparent adult outer tail feather on one side and a pure white feather on the other. This bird had probably moulted the one outer tail feather. Hence, if a juvenile outer tail feather is present on one side only, it is a juvenile bird.

Using the tail as an indicator of age and the relative position of the primaries, it is possible to distinguish both the sex and age of the birds.

Adult ♂ :	Primaries	-	10 = 4/5 (3/4, 5)
	Tail	-	Outer tail feathers with black mark (tail feathers tipped buff and white)
Adult ♀ :	Primaries	-	10 = 6/7 (7
	Tail	-	Outer tail feathers with black mark (tail feathers tipped buff and white)
Juvenile ♂ :	Primaries	-	10 = 6/7 (7
	Tail	-	Outer tail feathers white (or small black area towards edge) (tail feathers tipped buff only)
Juvenile ♀ :	Primaries	-	10 = 8/9 (7/8) 7
	Tail	-	Outer tail feathers white (or small black area towards edge) (tail feathers tipped buff only)

All birds were aged and sexed by looking at the wing formula and examining the gonads.

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Other criteria for ageing such as the length of crest and buff fringing to the coverts, were examined and although many birds correlated with these factors there were examples of birds not conforming.

REFERENCE

Witherby H.F., Jourdain, F.C.R., Ticehurst, N.F., and Tucker , B.W. 1940. Handbook of British Birds, Vol. IV; H.F. & G. Witherby Ltd. London.

NOTE: I should be grateful if anyone catching known age lapwings would examine the tail feathers and inform me of their findings at MAFF, Pest Infestation Control Laboratory, Tangley Place, Worplesdon, Guildford, Surrey GU3 3LQ.

MIST NETTING FOR LAPWINGS AT AN INLAND GRAVEL PIT

by C. M. Hemmings

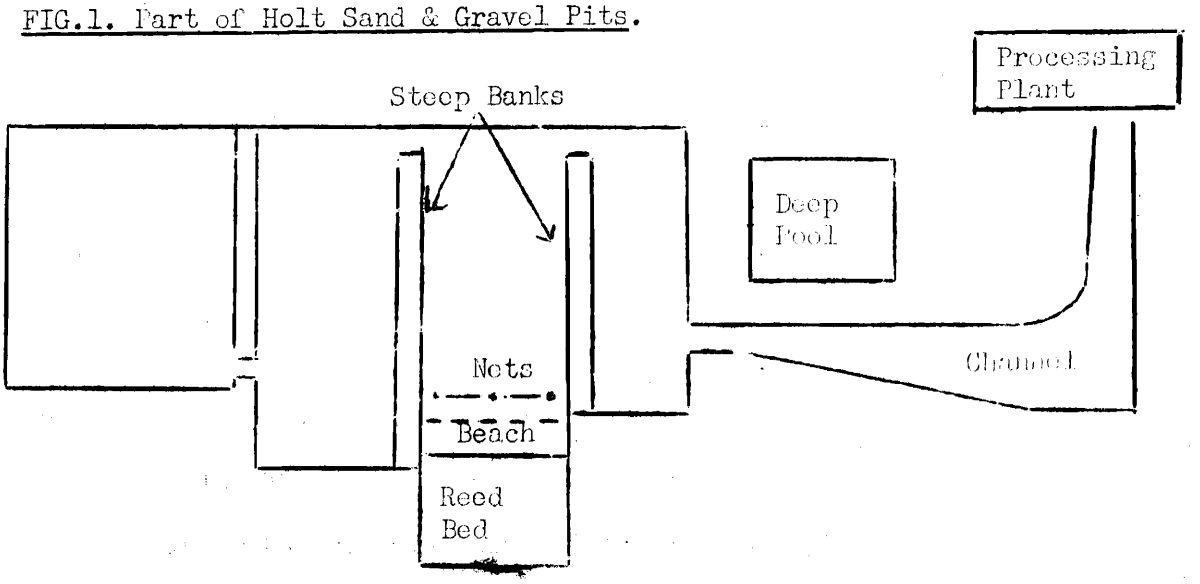
Between 9th October 1975 and 7th January 1976 sixteen attempts were made to mist net Lapwings Vanellus vanellus using three shelf, 14 metre, wader nets, at Holtsand and gravel pits, Ombersley, Droitwich, Worcestershire, 52° 15' N - 20° 15' W. 63 birds were caught and the purpose of this note is to show that persistant inland netting can give good results, given a suitable site.

The land for 2 km to the south shows the effect of gravel extraction over many years. Although some parts are now cultivated, and crops such as sugar beet are grown, many parts are too low lying and damp for grazing cattle or sheep in winter. During autumn and early winter flocks of up to 2,000 Lapwings gather in this area.

The habit of Curlews, and later Lapwings, of visiting one of the gravel pit pools during the evening towards dusk was observed whilst netting a hirundine/wagtail roost during August. The birds landed in shallow water close to a 30 metre wide sandy beach which divided a 500 x 35 metre channel. Steep banks 5 metres high bordered the long sides. Two nets, 14 metres wide were set across the channel, 10 metres into the water from the beach see Fig 1.

As the Curlews before them, Lapwings visited the area during the evening and after dark. Whether to roost, bathe or drink I am not sure but there was probably little food there. They flighted in low across the water between the 5 metre high banks on either side towards the sandy beach, encountering the nets on the way.

FIG.1. Part of Holt Sand & Gravel Pits.



After the first few mid week outings because the days were becoming shorter it was impossible for me to go to the area before dark. There was no alternative but to set the nets in the dark. Although this created a disturbance, birds always returned to the area within half an hour. During the daytime they usually dissappeared completely if disturbed. No attempts were made to catch birds after mid-night although I am confident that successful catching could have continued until dawn.

The maximum number of birds seen over the gravel pit area at any one time was 15, although flocks totalling up to 2,000 were present within half a kilometre. It seems as if small numbers from the flocks continually visit the gravel pits, perhaps to drink.

The number of Lapwings trapped per visit changed little with weather conditions. Increased movement on light nights compensated for the less obvious apppearance of the nets on dull, wet nights when birds preferred to stay on the nearby fields. Peak catches were between the 22nd and 29th October with a maximum of 13 on the 26th October, and between 25th November and 10th December with 6 on 4th December. Outside these dates no more than three were trapped on each occasion. However, over the whole period 63 Lapwings were caught (none re-trapped). Other birds included 10 Snipe, 1 Jack Snipe, 1 Curlew and Teal.

In all 16 visits were made which averaged 4 Lapwings a visit, or to put it another way, one every 1¼ hours. But leaving my job after dark and wanting to go netting (convincing my wife of my good intentions was one problem!) I could be confident the birds would be there, and it proved to be possible to catch Lapwings a few at a time over a long period. Apart from becoming more familiar with the species (all the caught birds were aged, sexed, weighed and measured), slowly increasing the ringing total may turn up an unexpected bonus. Like DR 19207, ringed at Holt Gravel Pits on 14th October 1975 and found dead in northern Hungary on 9th March 1976.

When I visited the gravel pits again in mid June 1976 I found a dramatic change in the appearance of the area, with new channels dug, some places completely filled in and other areas exposed. Flocks of Lapwings were again present in a similar but recently formed area and Curlews and moulting Lapwings (one a re-trap from 26th October 1975) have been caught in less obvious, recently acquired, Scottish made nets.

C.M. Hemmings, "Dunlin", 6 Tollhouse Close, Rushwick, Worcester.

CATCHING LAPWINGS WITH CANNON NETS

by C D T Minton

Introduction

For some years it has been the intention of Wader Study Group members to devote more attention to the study of inland waders, especially Lapwing and Golden Plover, and in particular to see whether the cannon netting technique, now employed so successfully on coastal waders, can be used effectively at inland sites. In the past a few small cannon net catches had been made (including one of 12 Snipe!) on an ad hoc basis, but in December 1974 the opportunity arose to make some more significant catches of Lapwing. This has triggered off a concerted study programme and 700 Lapwing have now been caught. A number of interesting aspects of Lapwing feeding and roosting behaviour have already become apparent and since these are highly relevant to catching techniques they are documented here so that others contemplating Lapwing studies may benefit.

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SUMMER (June to September)

Small flocks of adult Lapwings begin to appear as early as the end of May and from early June onwards fairly large numbers can be seen coming into eastern Britain from the Continent so that by the end of June congregations of a hundred or more are not infrequent. At this time of year most land is under cultivation and the amount of suitable Lapwing feeding and roosting habitat is small. In the English Midlands and The Fens (where most of my experience lies) it is confined to short grass (grazed) fields, gravel pits, the perimeters of reservoirs and the occasional fallow (or early-cleared potato) field.

Lapwing habits depend very much on the weather and, to a lesser extent, on the moon. On a normal warm and dry summers day birds congregate to roost between 0900 and 1100 and remain relatively inactive until 1800 - 2000, when they again disperse to feed. These daytime roosts are most frequently close to water and some bathing, preening and drinking takes place, though most of the time is spent sleeping. If, however, the weather is wet, or the ground is wet following rain, then this daytime roosting period is largely dispensed with and the birds will actively feed for much of the day.

Over and above the effects of weather, the state of the moon also affects Lapwing behaviour. At periods of full moon a much greater proportion of the daytime is spent roosting (e.g. flocks can form as early as 0700 on a hot day). Conversely when there is no moon Lapwings spend a greater proportion of the day feeding and then congregate at dusk, often squatting down to become almost invisible on a ploughed field.

Since Lapwings can best be caught in numbers when they are concentrated at roosts - being well spread out usually when feeding - it follows that the most successful time to cannon net them is during period of hot, dry weather at the time of the full moon. Nets should ideally be set by 0900 and the first catch can often be made before 1100, with other catches later in the day at good sites. Decoys are helpful in getting the birds to land in the right area. Catches are typically of 20-40 birds, but one catch of 80 (in a single net) was made.

WINTER (November to February)

In winter Lapwings have a very much wider choice of habitat, but they still seem to follow fairly regular patterns of behaviour. The most common routine in the Midlands is for birds to feed on grass pastures and to congregate to roost on ploughed fields, though some feeding on the latter (particularly when newly ploughed) does occur.

The moon appears to have a relatively greater effect in winter, for even in wet weather daytime roosts will form. However, in 'no moon' periods birds often spend most of the day feeding and only congregate to roost at or after dusk. Catching, with cannon nets set of ploughed fields one day to catch soon after dawn the next day is therefore much more successful in the winter at periods of full moon. Catching at roosts prior to dusk is less successful.

On frosty mornings Lapwings will often roost, whatever the state of the moon, until the sun has melted the frost sufficiently for them to be able to feed. Such mornings therefore give an increased chance of making a cannon net catch.

Apart from the above, which refers primarily to farmland habitats, an interesting pattern of behaviour has been noticed at Blithfield Reservoir, Staffs., and this has provided the opportunity for some nice winter catches. Soon after dawn Lapwings tend to come down to favoured parts of the shoreline to bathe, preen and drink in some concentration. They may only stay for perhaps half an hour before dispersing again to the surrounding fields to

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feed, although some may return, at irregular intervals, during the day. As before, nets are set the previous day and decoy s are sometimes used. However, on moonlight nights some birds may arrive before dawn and care should be taken not to disturb these when getting into the firing position.

OTHER POINTS

Nets should be set at a comparatively low angle (10-15°) because Lapwings are extremely quick at taking off and escaping before the net comes to the ground. Their large wing area may enable them to do this. This can also lead to them falling awkwardly in the net, however, and the occasional unexpected wing injury has occurred (please note the circumstances of any such occurrences and report back to Bob Spencer/Tony Prater).

Lapwings (and Golden Plover) seem comparatively unwary of nets, but camouflaging where practicable is desirable. A "jiggler", to remove birds standing too close to the net, is very necessary. "Twinkling" works surprisingly well on fields - especially with a vehicle, but also with someone walking or crawling. Fetching birds from further afield can sometimes be very frustrating - they can fly high and far in the wrong direction!

After catching, birds are best covered with light weight material in the same way as shore waders, before extractionfrom the cannon nets and put in keeping cages.

GLOSSARY

"jiggler" - string with rags just in front of the set net, fastened by elastic to peg at far end of net and moved by pulling from firing position or other hide in line with net.

"twinkling" - gently moving flock by approaching slowly. Ideally, flashers (twinkles) of wings are seen as the near birds fly to far side of flock.

C D.T. Minton, 65 St John's Hill, Shenstone, Litchfield, Staffs.

LAPWING WEIGHTS AND MOULT

By L R Goodyer

INTRODUCTION

A preliminary analysis has been made of Lapwing (Vanellus vanellus) weight and moult data, mainly collected between December 1974 and February 1976 in the West Midlands. Although the study is still continuing the interim results are presented here and comparisons are made with similar data on Lapwing presented earlier (Kennedy 1973), and on coastal waders (see Wash Wader Ringing Group Report 1973/4).

WEIGHT

Fig 1 shows the mean monthly weights of 749 Lapwings (658 adult and 91 juvenile/first winter) caught in the period late June to mid February (no samples have yet been obtained in March, April or May). Mean adult weights remain relatively constant at 220-230 gm (average 227 gm) in the period June to September when the annual moult is taking place. Adult weights then rise to a December peak of 284 gms - an increase of 30% - before falling quite

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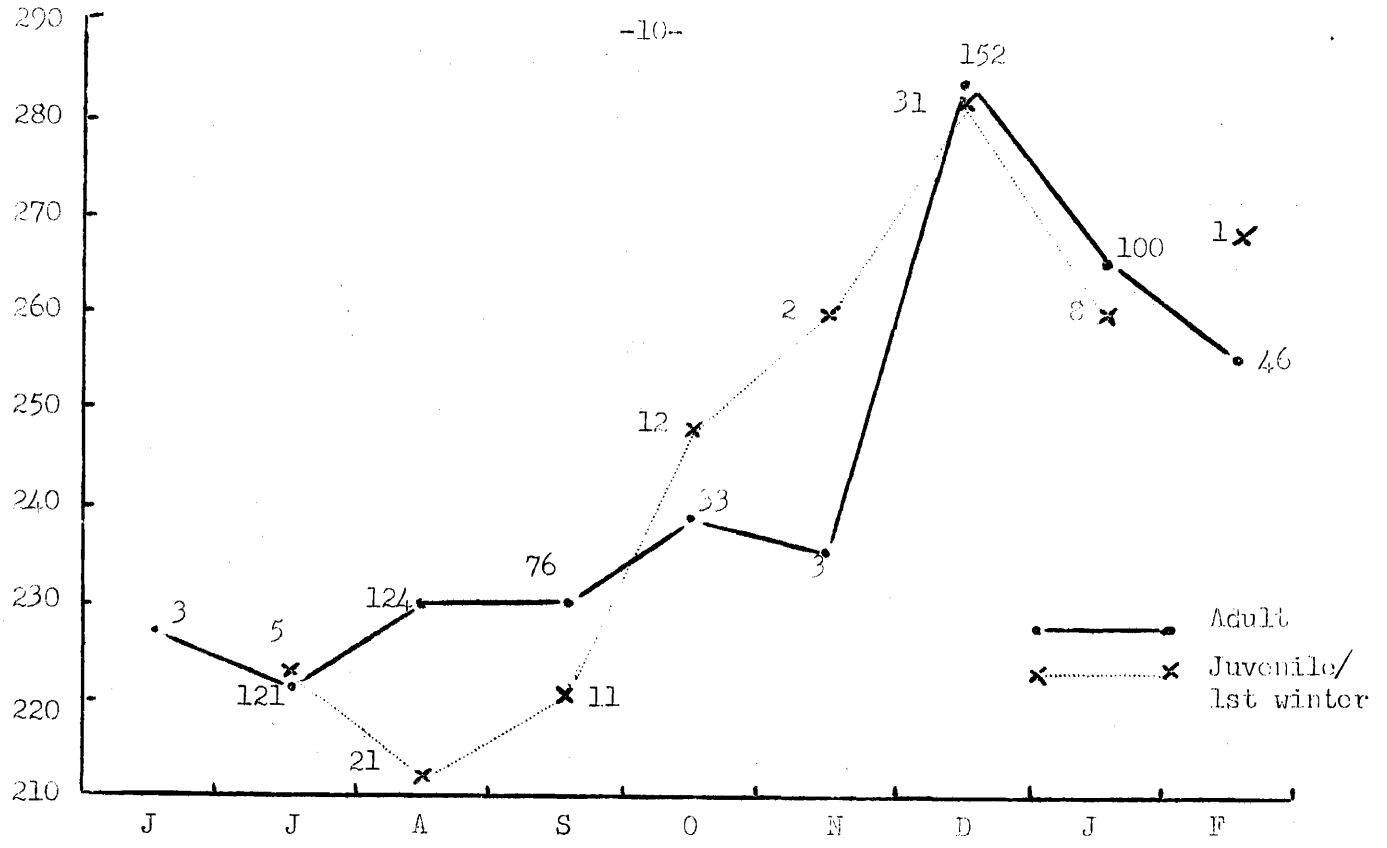

FIG 1. LAPWING - mean monthly weights.

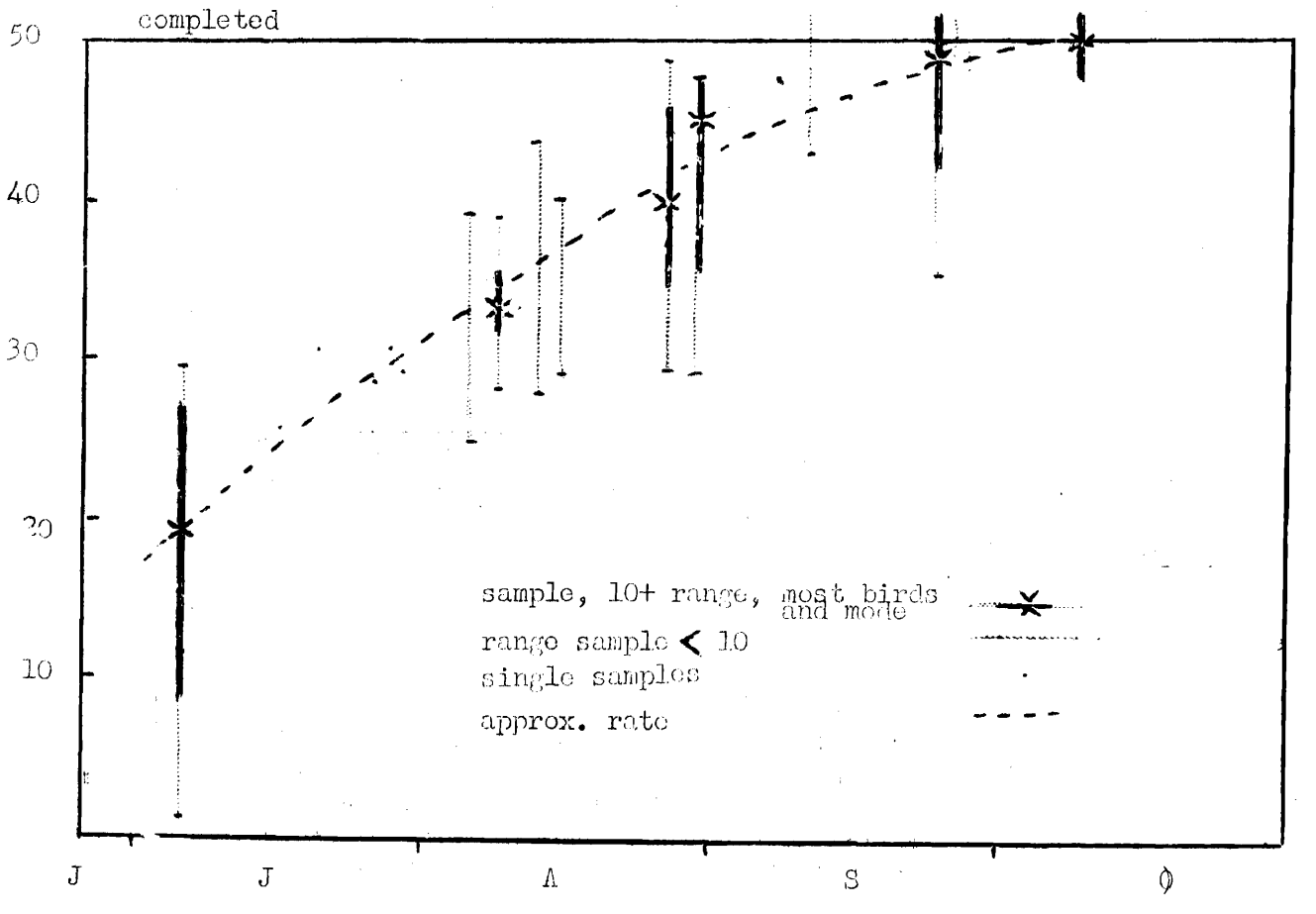

FIG 2. Moult of Lapwing

rapidly in January and February. Juvenile weights appear to follow a broadly similar pattern - though sample sizes at present are small - except that in the summer (especially August) their weights are rather lower. This pattern supports that presented by Kennedy (1973) for Lapwing from August to December, but extends the coverage to include data from June to February.

This pattern of weight change during the year is very similar to that of some of the coastal waders (see WWRG report 1973/4) and suggests (amongst other things) that:-

a) because there is no significant fat accumulation in July-September (the period of "autumn migration" for many waders) the birds present are probably not, at that time, undertaking long distance migratory movement. This is also probably indicated by the fact that virtually all the adult birds are in wing moult (see later).

b) the December peak is related to an accumulation of fat which may be necessary to tide birds over any short periods of food unavailability later in the winter and to facilitate cold weather movements should these be forced on the birds bysevere or prolonged cold weather. The difference between the autumn weight (probably relatively fat free) and the early winter peak (+ 30%) is greater than that of some coastal waders but is similar to that of Grey Plover (Pluvialis squatarola) and Ringed Plover (Charadrius hiaticula) Possibly the plovers, with their shorter beaks, are more affected by cold weather and therefore need a greater fat reserve.

c) juveniles may have a difficult time finding food in summer during their first few months of independence.

MOULT

The primary moult was recorded on adult Lapwings caught between 22nd June and 27th October (mainly in 1975) and moult scores are plotted against date in Fig 2. The short outermost primary was ignored, as in other wader studies. Birds which had not yet started moult and birds which had completed moult were, however, noted and thus it was possible to determine the mode as well as the mean moult score on any date. Since the distribution of samples was far from random over the moulting period it was not possible to use the more conventional method (mean date for each moult score) to estimate the average duration of the moult. Instead the mode of the moult score on each date was used to determine the average state of moult and a line drawn through these points gave the typical moult progression.

It would appear that moult typically starts in the third week of June and is completed at the end of September - averaging about 105 days. The comparative lack of spread of moult scores on each date suggests a relatively homogeneous moulting population. Thus, on 6th July 1975, only two and a half weeks after the average 'start date' (estimated by extrapolation), there were no birds (in a sample of 120) which had not yet started their moult. The moult duration is slightly longer than that of some coastal waders of similar size (e.g. Grey Plover, 90 days, Branson and Minton, in press). Presumably the earlier start to the moult in Lapwing is facilated by the earlier breeding season and thus there is more time for the moult to be carried out before the need arises to utilise resources for the autumn fat accumulation.

FUTURE WORK

Attempts will be made in 1976 (and future years) to obtain catches of birds for weight measurement in those months where samples are still small (or non-

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existant). More adult moult data is also needed at times where there are significant gaps in the present data (e.g. June, second half of July, first half of September). Variations in weight and moult from year to year will also be studied.

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INTERNATIONAL WADER COUNTS

by Tony Prater

Ringing, in common with most other migration data, has a number of limitations. Recoveries often provide only the broad picture of migration routes being dependent on the vagaries of the distribution of catching effort (often luck) and the likelyhood of a bird being reported once found. Unfortunately detailed biometric analyses, which give a much more precise understanding of migration routes and timing, are only feasible on relatively few species at the moment. We are still at a stage where all information needed in order to piece together a picture. Here counts are of considerable value in supplementing ringing data, or vica versa, depending on preference!

The International Waterfowl Research Bureau (IWRB), has a number of research groups which coordinate and collate international counts of waterfowl. The Wader Research Group (WRG) is concerned with wader counts throughout Europe, Africa and Asia. The aims of counts are threefold:-

i) to assess the numbers and distribution of wintering waders throughout the region - based primarily on January counts but also including data from other months.

ii) to provide an objective assessment of the importance of each site for waders.

iii) to collate regular counts of each species in as many areas (from single sites, to regional totals, to national totals) as possible across its range. This helps to provide a picture of the way each species migrates - its general speed, direction and relative abundance. This ties in very closely with ringing studies.

It is hoped that the WSG bulletin will carry a regular feature about recent counts. Most of the information received prior to 1974 has been summarised in the Proceedings of the 5th International Conference on the Conservation of Wetlands and Waterfowl, Heiligenhafen 1974, which will be published by the IWRB during 1976. Data received for Europe between 1974 and 1976 are summarised below, and those for Africa and Asia will be included in the next bulletin.

a) WADDEN SEA

Complete counts from Esbjerg (Denmark) to Den Helder (Netherlands) have been made on two occasions - 12-16 January 1975 and 19-26 April 1975. These revealed totals of 716,154 and 847,182 waders respectively.

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The details of these two counts, with the UK figures for comparison, are presented in Table 1 below.

TABLE 1. WADDENSEA AND UK TOTALS OF MOST WADER SPECIES COUNTED IN JANUARY AND APRIL 1975.

	Jan 1975 Waddensea	UK	April 1975 Waddensea	UK
Oystercatcher	297,400	184,000	83,300	54,700
Ringed Plover	50	7,400	1,150	5,600
Grey Plover	4,000	13,300	6,500	8,200
Turnstone	1,700	10,000	3,400	10,400
Curlew	84,300	60,000	45,400	21,100
Black-tailed Godwit	-	4,800	1,100	700
Bar-tailed Godwit	21,500	38,500	104,900	5,800
Redshank	15,600	75,000	18,000	27,600
Spotted Redshank	3	72	1,640	82
Greenshank	9	163	390	130
Knot	38,500	180,200	69,300	131,700
Dunlin	220,100	558,100	458,000	161,500
Sanderling	1,950	6,400	1,800	5,400
Ruff	150	170	350	60
Avocet	2,500	88	6,340	28
TOTAL Including other spp.	716,200	1,346,000	847,000	450,000

In addition to these, counts have been made on 19th October 1974 in the Netherlands and on 19th May 1974, 18th August 1974, 15 September 1974 and 24th August 1975 in Denmark (these were made by the D.O.F. Vadefuglegruppen).

b) BRITAIN

The monthly counts of the BTO/RSPB/WT 'Birds of EstuariesEnquiry' were made up to May 1975. During the July 1974-May 1975 period the principal peak counts were Dunlin 622,000 (December), Oystercatcher 224,500 (September), Knot 216,500 (December), Redshank 104,300 (September), Curlew 83,300 (September), Bar-tailed Godwit 40,200 (December), Sanderling 27,100 (May), Ringed Plover 26,250 (September), Grey Plover 15,250 (September) and Turnstone 11,700 (September). From October to February over 1,000,000 waders were counted, peaking at 1,383,000 in December and 1,346,000 in January.

c) BELGIUM

In Janury 1975 the whole of the coast line was counted and the principal species were Turnstone (870), Purple Sandpiper (474) and Sanderling (700).

d) PORTUGAL

January counts were made in 1975 and 1976 on the major estuaries of Portugal. The four principal areas were:-

Tejo (39,600 in 1975; 57,500 in 1976) - where average counts were Dunlin (25,000), Black-tailed Godwit (9,300), Avocet (8,700), Grey Plover (2,000), Redshank (1,600). Of the less common species 100 Kentish Plovers were significant.

Algarve (12,800 in 1975; 20,300 in 1976) including Dunlin (9,300), Black-tailed Godwit and Redshank (1,200), Bar-tailed Godwit (800+). Southern wintering species were relatively plentiful with over 600 Kentish Plovers, 500 Little Stints, 130 Spotted Redshanks and 110 Black-winged Stilts.

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Aveiro. (14,250 in 1975) including Dunlin (5,500), Black- tailed Godwit (4,000), Bar-tailed Godwit (1,300) and Avocet (700). Even so far north as here there were 120 Kentish Plovers and 30 Little Stints.

Sado (11,400 in 1975) including Dunlin 8,500) and Redshank (1,100).

c) SPAIN

January 1975 counts showed that there were only three areas on the Mediterranean and southern Atlantic coasts which supported over a thousand waders. In the Mediterranean the Ebro Delta (1,564) was the best with Dunlin (600) and Black-tailed Godwit (575) the most frequent. Even here there were 152 Little Stints, a few Kentish and a single Little Ringed Plover.

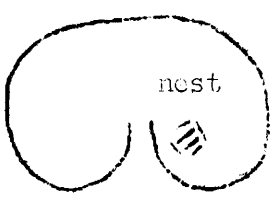
On the S W Atlantic coast the marismas of the Guadalquivir had 5,900 waders mainly Black-tailed Godwit (5,650) but also 180 Avocets, 32 Black winged Stilts and 5 Marsh Sandpipers. The complex of the Rio Tinto/Odiel/Umbria near Huelva supported 2,900 waders, mostly Golden Plovers although over 2,000 Grey Plovers have been recorded here on autumn passage.

As a postscript to this mass of figures I would appeal to any bird watchers, who visit and count waders in the less frequently watched areas including Spain, Portugal, Italy, SE Europe or anywhere else to send the IWRB/WRG copies of counts. All data, at any time of year, are needed but please try to count the whole of an area and clearly indicate if coverage is incomplete. Count data are collected by Tony Prater, BTO, Beech Grove, Tring, Herts.

METHODS OF CATCHING AND STUDYING BREEDING WADERS - CONTINUED AGAIN

The articles in Bulletins 16 & 17 by G.H. Green, P.N. Ferns and R.M. Bishop have continued to generate much discussion. R.W. Summers has kindly sent us a copy of his article on "Trapping waders at the nest" (Safring News 4 (1): 18-19, 1975), concerning the use of the heart-shaped trap. We reprint part of this below.

"Find a wader nest and place the trap over it such that the nest is in the position as seen in Fig 1. This is critical. If the trap is placed over the nest so that the latter is near the the back or sides, the bird may false-brood outside the trap. Also if the nest is in direct line with the entrance the bird will walk out again. The trap should therefore be placed as shown, and with the entrance facing the ringer's direction of approach. The trap entrance should be adjusted so that it is just wide enough for the bird to get through. Pegs are pushed through the wire and into the ground keeping the trap steady. Then retire.



The "normal" behaviour to the trap by the nest owner is as follows (as seen in European Oystercatcher): once the ringer has departed from the scene the bird reappears in about 5 minutes and lands some 50 m from the trap. It approaches the trap and then starts circling at a radius of 25 m but getting closer and closer all the time. This circling may be interspersed with periods of standing, or short retreats from the trap. After about 15 minutes the bird circles within inches of the trap, sometimes pecking at the mesh. It eventually concentrates its activities near the entrance, as the nest is closest to the trap wall at this point and about 20 from setting, the bird enters and settles on the eggs.

We gave the bird a moment or two on the eggs and then walked over to the trap. The bird rises from the eggs, moves to the back of the trap and pushes with the bill trying to effect an exit.

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Only when the ringer is about 10 m from the trap does the bird panic and start to flap about, so the last few metres should be covered quickly and the bird subdued.

20-25 minutes was the usual trapping time though 4 minutes a record. If the bird is not showing signs of entry after 20-25 minutes (i.e. not concentrating its activities at the trap entrance), the trap must be removed, and 30 minutes must be regarded as a maximum for the bird to be kept off its eggs. Sometimes the drive to incubate will be low (e.g. before a clutch is complete or in hot weather) and one must accept failure."

In my experience, there are tremendous variations in the responses of individual birds to traps at the nest, some keeping several metres away, while others walked in immediately. Some birds showed different extremes of behaviour on different days. In some cases it was clear that a bird would enter the trap only by walking directly towards the nest which, therefore, had to be in line with the entrance. As Harry Green and Peter Ferns pointed out earlier, this problem may be overcome by approaching the trap from the same site as the entrance from as close a position as concealment will allow. Probably the answer is to recognise the differences in individuals and be prepared to try several trap positions as well as different trapping methods (see earlier articles), after a long interval to allow incubation to be re-established.

Finally, in reply to yet another query, it should be stressed that, whatever method is used, the nest and trap must be kept under continual observation during the trapping attempt.

Mike Pienkowski

WADER NETS

The first Knox wader nets made from material half as thick (and strong) again as normal mist nets arrived at Beech Grove in May. One was immediately erected on the lawn and proved to be very well finished with an immense amount of slack and good strong, inelastic shelf-strings. The main problem with these 3-shelf nets may be the height to which they will set - with taut side strings the netting is about ten feet high and the pockets have a really good amount of bag. Anyone with short poles (or tall water) should beware.

Comments from ringers have been favourable. Even those apparently wedded to les filets Francais have probably been convinced on the grounds of quality, price and availability to buy British. Rather few 12 m nets were sold but most of the 18 m nets from the first production run of netting have now gone. If you want to reserve one (or more) write quickly. Knox have been asked to make more material but, at the moment, they cannot give a definite delivery date - they will be encouraged to produce it quickly.

Since the nets are made from single shelf lengths joined by the shelf-string the nets may readily be lowered into 2-shelf (or single shelf) format. When the next lot of netting is available we will certainly be offering un-made-up single shelf netting. Please let me know if you feel strongly about what you would want:

a) neatly packaged loose lengths with exactly the right number of meshes to make a shelf of each length of made up net (12m and 18m)

b) accurately cut lengths of any other size

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c) continuous skeins that the R.O. cuts to approximate length.

I would personally opt for a) - easier for the sales staff here at Beech Grove and should make certain that the bits bought will fit into made-up nets if anyone is cutting down (or up) or repairing.

Chris Mead

PHHT NETS

The Ringing and Migration Committee have decided that an initial batch of 20 sets of Phhting gear and the associated nets should be offered for sale to selected ringers who:

a) can pay for the apparatus - probably £40 or so per net.

b) have experience in using cannon-nets or large clap-nets.

c) will use the equipment and report back on their experiences.

Then full regulations as to how this new technique will be regulated will be discussed and published by the Committee.

An article appears in the July issue of the Ringer's Bulletin and I would expect that many of the ringers who will be selected to have the phhts will be members of the wader study group. I personally expect them to be a great success and fully expect them to create almost as much of a boost to the capture of selected waders as cannon nets were a decade ago. They are so easy to use and only need a rather small team of experienced people to handle and process the birds caught.

Chris Mead

REQUEST FOR JACK SNIPE DATA

A study is being undertaken on Jack Snipe. Data on biometrics, moult, ringing recoveries, migration and diurnal/nocturnal activity patterns etc are all required, especially from Scandinavia but also from other areas. Any information will be welcomed by Frank-Ulrich Schmidt, Wolfshof 8, 3410 Northeim, West Germany.

GREENLAND COLOUR DYEING

Hans Meltofte has been spending the summer of 1976 in NE Greenland and he has been colour dyeing the following species - Ringed Plover, Turnstone, Knot, Dunlin and Sanderling. If any of these birds are seen will you please send details including - date, place, species, colour, which parts of the body coloured, rings etc. to either Hans Meltofte, Tøllegade 23, 3tv., DK 2200, Copenhagen N, Denmark or Tony Prater, BTO, Beech Grove, Tring, Herts.

SOUTH AFRICAN COLOUR DYEING

This scheme announced previously has resulted in at least one long distance sighting of a Curlew Sandpiper in Ethiopia. We hope for more sightings.

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WADER NUMBERS IN SOUTH AFRICA

During December 1975 and January 1976 the Western Cape Wader Study Group organised extensive counts of coastal waders from Olifants River (31° 30' S, 18° 10' E) to Knysna Lagoon (34° 00' S, 23° 30' E). They have produced a detailed 162 page report on these counts. The report has three major sections, the first summarises numbers and distribution of waders in this part of south Africa, the second considers the conservation importance of the areas and the third part of 112 pages includes the detailed data on each locality. Among the birds observed there were almost 55,000 Curlew Sandpipers, 15,000 Sanderling, 9,100 Turnstone and 6,000 Little Stint and the principal areas were Langebaan Lagoon with 36,800 and Berg estuary with 19,000 waders. Copies of this report are obtainable from M Waltner, 5 Montagu Way, Pinelands, 7405, Cape Province, South Africa, price R2.00 (please check current exchange rates!)

REPORTS OF WADER STUDIES IN MOROCCO 1971-72

Due to continued demand, copies of the "University of East Anglia Expedition to Morocco 1971 Report" are no longer available for sale. A few copies have been retained and are available on loan (from M W Pienkowski), provided that the borrower pays postage in both directions. There are, of course, no objections to the making of photocopies of the Report.

It is regretted that it has been necessary to increase the price of the joint report of UEA Expedition to Tarfaya Province, Morocco 1972 and the Cambridge Sidi Moussa Expedition 1972: "Studies on coastal birds and wetlands in Morocco 1972" (see WSG Bull. 16) from £1.00 to£2.00 per copy. This now includes postage. The increase from the price advertised prior to publication is due to inflated production costs and continually rising postal charges. All orders received at the earlier price have been met. Copies are available from M W Pienkowski (address on page 1).

TUNISIAN RINGING SCHEME

We are pleased to inform you that the ornithological activities in Tunisia continue to run under the auspices of the Institute of Scientific and Technical Research. Also, in the interest of action that is taking place, potential visitors are encouraged to contact the local ornithologist at the following address: Michel Alexandre Czajkowski
c/o M. Hadj Taieb el Baouab,
4 Rue Ali Belahouane,
La Marsa, Tunisia.

RINGING OYSTERCATCHERS

Oystercatcher rings are large enough for the number to be read in the field. We have learned that there is a study in progress in Norway on this species and an attempt has been made to read all rings in the study area. Unfortunately at least two rings have been put on upside down making them very difficult to read. We hope that all ringers ringing birds of Redshank size and above will try to put rings on the correct way up to aid anyone reading ring numbers in the future.

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Spotted or Nordmann's Greenshank *Tringa guttifer* (pp. 136-138)

Solitary Snipe *Gallinago solitaria* (139-146)

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