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# SCOTTISH BIRDS



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SCOTTISH ORNITHOLOGISTS' CLUB

Vol. 13 No. 8

Winter 1985



White-headed Manakin *Manacus manacus* (R.G.)

# A Dictionary of Birds

Edited by BRUCE CAMPBELL and ELIZABETH LACK

Art editor Robert Gillmor

Photographic editor Eric Hosking

Compiled for the British Ornithologists' Union the book enlists major contributions from over 280 ornithologists from 29 countries. Their authoritative accounts cover the field of modern ornithology and related subjects. Its editors and contributors, to text and illustrations, gave their time and knowledge at no cost and have earned the thanks and acclaim of users for many years to come.

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## CONTENTS OF VOLUME 13, NUMBER 8, WINTER 1985

---

	<i>Page</i>
Editorial ... ..	239
Photographic Competition Winners ... ..	240
Errata ... ..	240
Wintering Goldeneye in the Moray Firth (J. Barrett & C. F. Barrett) ... ..	241
Storm Petrel ringing in Caithness (H. Clark) ... ..	250
Stop Press - <i>Birds in Scotland</i> ... ..	257
Counts of some breeding birds in two recently afforested areas of Kintyre (S. J. Petty) ... ..	258
Golden Eagles and lambs in Badenoch, Highland (D. Weir)	263
Short Notes	
Unusual method of killing prey by Sparrowhawk (B. J. Broadley) ... ..	268
Dipper with one leg (B. J. Broadley) ... ..	268
Waders wintering on Colonsay and Oransay (D. C. Jardine, J. Clarke & P. M. Clarke) ... ..	268
Oystercatcher laying in Lapwing nest (M. Purvey)	270
Interaction between Marsh Harrier and Roe Deer (R. C. Dickson) ... ..	270
Obituary - Maxwell K. Hamilton (A. D. Peirse-Duncombe)	271
Reviews & current literature ... ..	273
Notices ... ..	274
Important Notice ... ..	275
The Scottish Ornithologists' Club ... ..	276
Advice to contributors ... ..	280
Recent reports (P. M. Ellis) ... ..	281

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Volume 13 No. 8

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Edited by V. M. Thom, assisted by S. R. D. da Prato  
and R. W. Furness

## Editorial

### A pre-view of the new publications

Preparations are now well in hand for the change-over in *Scottish Birds*, from the format in which it has appeared for the last 27 years to a twice-yearly publication, appearing in June and December. The summer number will consist largely of papers on studies or surveys of birds in Scotland, while the winter number (which will be bigger) will also include the *Scottish Bird Report*. Because there will be more pages available, and the new format will permit more words per page, we will not be forced to limit the length of individual papers purely for reasons of lack of space, while the change in printing process will allow us more flexibility in layout and illustration. Papers submitted will be published in order of acceptance.

Our other new publication is to be entitled *Scottish Bird News* (the words 'the Scottish Ornithologists' Club' will appear just above the title, so it will be clear that it is an SOC publication). The Editorial Committee considers that this title reflects the aim for this quarterly newsletter, which is to present topical material relating to birds and birdwatching. *Scottish Bird News*, due out early in March, June, September and December, will carry all the Club notices (including, we hope, much more about Branch activities than has appeared in recent years), reviews, appeals for help, conference notices and reports, comment on current conservation issues, news of ringing group activities, letters, short reports on recent or on-going surveys and fieldwork (eg Raptor Study Groups Report) and an expanded 'Recent Reports'. It will be illustrated with photographs, line drawings, cartoons, maps and diagrams, as appropriate.

The preparation of a publication like *Scottish Bird News* presents a somewhat different challenge to its Editors than does the production of a more formal journal of the *Scottish Birds* type. The interest and variety of its content is inevitably

dependent upon contributions from many more people, covering a much wider range of subjects. Topicality is all-important, so the interval between a 'happening' and the appearance of a report on it must be kept to the minimum practicable. And the final-stage bringing together of text and illustrations to fill the available space may involve last-minute editing and adjustment. An amended version of 'Advice to Contributors', detailing the requirements and conditions of acceptance for each of the new publications, appears on page 280 and is also available from the Secretary.

We hope that you will find these new productions both enjoyable and stimulating. The Editors would very much welcome constructive comment and suggestions. We would remind members, however, that—as Maury Meiklejohn wrote in his Editorial to *SB* 1(1)—a journal like *Scottish Birds* cannot hope to survive unless it is supported by numerous regular voluntary contributions. This is even more true of a magazine like *Scottish Bird News*. Its success or failure will lie largely in members' hands.

### Photographic Competition Winners

For this year's competition nine people submitted a total of 40 photographs, of which four were colour prints, ten were black & white prints, and the remainder colour transparencies. Judging was carried out by the Editorial Committee and the first three places were awarded to:

- 1 P. J. Newman - Dunlin at the nest (transparency)
- 2 E. Fellowes - Wheatear (b & w print)
- 3 W. E. Middleton - Swallows at the nest (transparency).

The winning photographs, and a selection of other entries, were displayed during the Conference; they will be published in the first number of *Scottish Bird News*. We are grateful to all who submitted photographs and hope that many more will do so next year—we are going to have increasing need of good quality photos for our publications.

**Errata** Sharp-eyed readers may already have noticed that in Stan da Prato's paper on "The breeding birds of agricultural land in south-east Scotland" the footnotes on pp. 213 and 214 had been transposed. Lothian birdwatchers puzzled by the first complete sentence on p 212 should amend their copies to read: "The absence or scarcity of Barn Owl, Jay and Magpie is typical of much of the Lothians..." We apologise to the author for these errors.



## Wintering Goldeneye in the Moray Firth

J. BARRETT and C. F. BARRETT

Ringing recoveries indicate that Goldeneye *Bucephala clangula* wintering in east Scotland come from the same breeding populations as those wintering in southern Scandinavia i.e. from northern and central Sweden. Whilst some birds from the breeding populations of south Sweden, Finland and western Russia also winter in southern Scandinavian waters many winter further south in central Europe and apparently do not reach east Scottish waters (Nilsson, 1969). The wintering

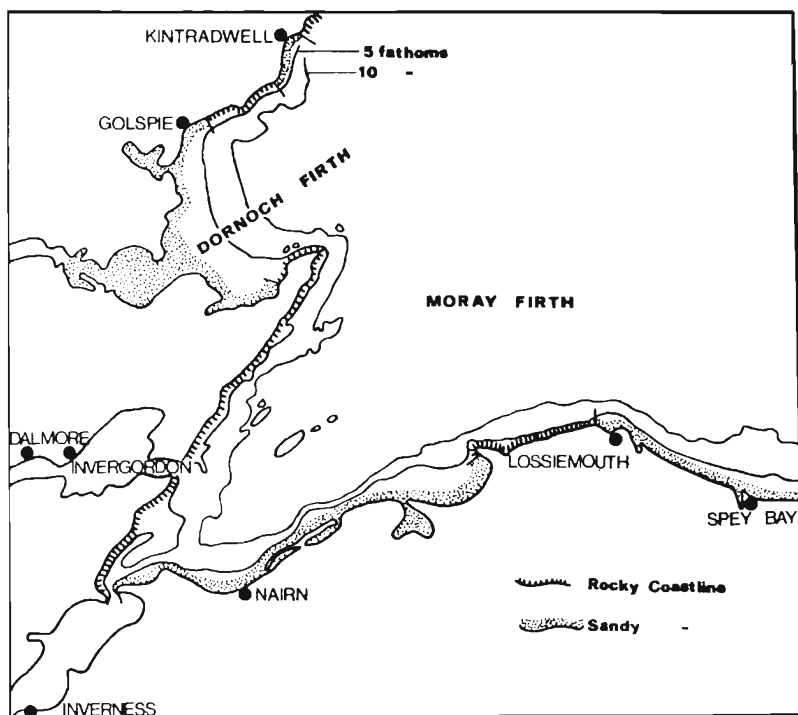


Figure 1. Moray Firth study area.

quarters of the small but expanding Scottish breeding population (Dennis and Dow, 1984) have yet to be determined.

In Scandinavia during the non-breeding season Goldeneye feed on inland lakes and in shallow coastal waters; there is no reference to them feeding in association with sewage outfalls. In eastern Scotland large concentrations feed in the vicinity of sewage outfalls (Milne and Campbell, 1973). This is so in the Moray Firth, though small numbers also feed on inland lakes and away from sewage outfalls in coastal waters. Past references have been made to the numbers of Goldeneye in the Moray Firth (eg Milne and Campbell, 1973; Pounder, 1976; Mudge and Allen, 1980), though in view of changes to domestic and industrial discharges in recent years, the situation is clearly changing (cf the Firth of Forth, Campbell, 1984). This paper includes some results from a larger study of seaduck behaviour in the Moray Firth undertaken by the RSPB between 1981 and 1983, as part of the environmental monitoring programme carried out for Britoil plc in relation to the Beatrice oilfield (Barrett, 1983).

#### **Study area and methods**

The study area covered the whole of the Moray Firth basin between Kintradwell, East Sutherland and Spey Bay, Morayshire and included sites within the inner Beaully, Cromarty and Dornoch Firths (Figure 1). The Moray Firth is largely a sandy area with shallow water extending well offshore in many places. Rocky stretches of coastline occur between Brora and Golspie, between Cromarty and Rosemarkie and between Burghead and Lossiemouth. The inner firths are mainly sheltered, shallow areas with considerable expanses of mudflat exposed at low tide.

Regular counts (up to five a month depending on weather conditions) were carried out in these areas from November 1981 - March 1982 and October 1982 - March 1983. Particular attention was paid to the major sewage outfalls, where the main concentrations of Goldeneye were known to occur.

#### **Results and discussion**

**Numbers and distribution** Table 1 shows the peak monthly counts for each site and the distribution (average usage—calculated from the mean of all the monthly counts over both winters) of Goldeneye. Invergordon-Dalmore and Inverness were of particular importance, together holding 72.6% of the overall Moray Firth population, (no other site held more than 6% of the total). Small concentrations occurred at Loch Fleet, off Nairn and at the mouths of the rivers Findhorn and Spey.

Peak counts occurred in January in the 1981-82 winter

Table 1: Peak monthly counts at each site in the Moray Firth, 1981-82 and 1982-83 and average usage for the two winters.

	October 82	November 81 82	December 81 82	January 82 83	February 82 83	March 82 83	Average Usage (%)
Kintradwell/ Golspie	0	2 9	4 3	4 0	0 0	4 0 8	0.8
Dornoch Firth	0	100 7	72 13	6 6	19 7	3 12	4.4
Edderton Bay	0	0 4	0 7	0 4	19 19	0 6	1.3
Tarbet Ness/ Chanonry Point	0	14 3	1 8	12 8	7 5	0 7	1.5
Invergordon/ Dalmore	2	21 222	227 112	197 74	65 178	62 229	25.3
Inverness	73	175 191	130 126	533 393	531 191	287 319	47.3
Ardersier/ Nairn	5	14 1	40 26	31 3	0 28	15 18	2.5
Culbin	8	0 14	39 2	39 2	4 28	52 6	4.6
Burghead Bay	65	13 3	32 18	70 46	58 35	78 40	5.6
Burghead/ Lossiemouth	0	8 8	10 7	42 11	11 28	11 10	2.8
Spey Bay	2	12 6	43 30	13 18	4 37	25 15	3.9
TOTAL	155	359 468	598 358	947 565	718 568	533 670	

and March in 1982-83. The count in January 1982 was boosted by a movement of birds to this coast coincident with an icing over of local inland lochs. If these additional birds are excluded, peak numbers of Goldeneye in the Moray Firth were between 600-700 birds each winter. The numbers at most sites remained fairly constant over the winter, fluctuations in the overall numbers reflecting changes at the two main sites.

**Effects of changing effluent treatment** Since 1970 there have been several major changes to effluent discharges in the Moray Firth. Invergordon-Dalmore : at Dalmore discharge of spent grain ceased when the maltings closed in July 1981 and there has also been a cut back in effluent discharge from the distillery. At Invergordon there has been no change in the quality of the discharges, which include both domestic and industrial effluents, but improvements are currently being made to discharge all crude sewage via one long sea outfall at Rosskeen. At the Invergordon distillery outfall a new plant was installed between 1970-'74 which enabled 85-90% of all solids to be removed and by 1981-82 further improvements increased this recovery to 100%. Burghead: in October 1978 a new discharge

pipe was commissioned in deeper water, over 1 km offshore. Inverness: in August 1982 the Carn Arc outfall was closed. All effluent (domestic, industrial and distillery wastes) is now being discharged through the Longman outfall, where there has been little improvement in quality.

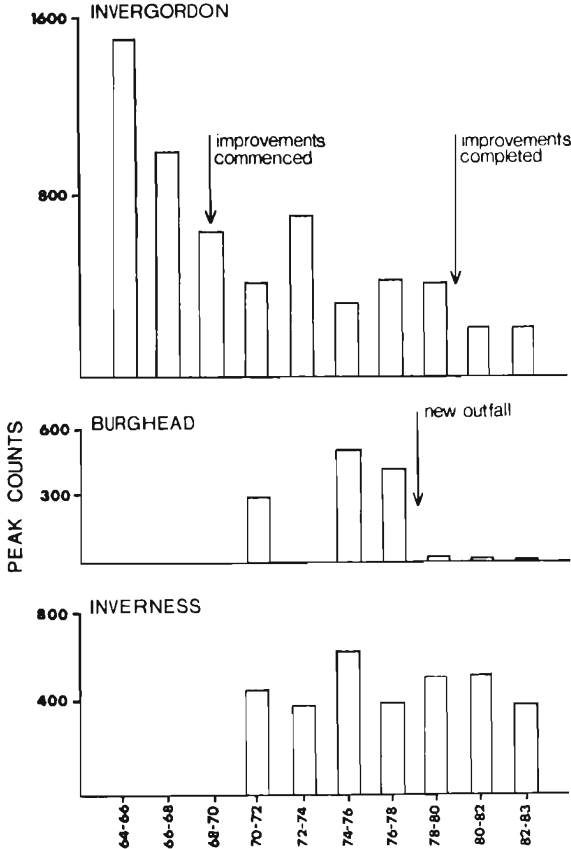


Figure 2. Biennial peak Goldeneye numbers at Invergordon, Burghead and Inverness.

Sources of information : Wildfowl Trust counts, Scottish Bird Report, Pounder (1976), Mudge (1978), Allen (1979).

The effects of these various changes are illustrated in Figure 2 (data show biennial peak counts where available, sources of information are listed). Following improvements at Inver-

gordon-Dalmore and Burghead there were declines in the Goldeneye populations. At Burghead the decline was dramatic, the birds presumably unable to feed in deeper water, whilst at Invergordon-Dalmore the decline has been gradual, coincident with improvements spanning over a decade. A further decline might be expected once the new outfall is constructed. At Inverness, where there has been little change, numbers of Goldeneye have remained fairly constant and there does not appear to have been any increase here following the declines at Invergordon-Dalmore and Burghead. After the Carn Arc outfall closed, the small flock of up to 30 Goldeneye and 350 Tufted Duck *Aythya fuligula* (M. I. Harvey pers comm) previously in the area disappeared, probably moving the short distance to the Longman outfall.

Overall Goldeneye numbers in the Moray Firth have declined from about 2000 birds in the mid-1960s to a present level of about 600-700 birds. This may in part be attributable to improved effluent treatment procedures which have had similar effects elsewhere in Scotland. Campbell (1984) showed that the numbers of Goldeneye in the Firth of Forth declined sharply at three main outfalls following the introduction of a major sewage treatment improvement scheme. Although there were some small scale shifts to other sites within the Forth, there was no evidence of any major relocation locally, but as was apparent in the Moray Firth the birds simply abandoned the area.

**Feeding behaviour** Goldeneye feeding activity was observed at the Longman outfall, Inverness. Observations were carried out over five tidal cycles. The whole flock was scanned systematically in hourly periods. Each part of the flock was observed continuously for a period of 5 minutes, the number of birds recorded, and any feeding activity (ie birds recorded diving) within that period, noted. The next portion of the flock would then be observed and in this manner an estimate of the total number of birds feeding within each hourly period was made (Figure 3). The observations were simplified by the fact that the flock was geographically separated into a feeding section and a resting section, feeding birds generally located close to the outfall. There was a significant increase in feeding activity as tide fell (Fig. 3:  $r=0.94$ ,  $p<0.001$ ). At high tide most birds rested in a loose flock in the vicinity of the outfall. If Goldeneye are feeding on solid material contained in the sewage discharge then a decrease in feeding activity might be anticipated when the discharge ceased (this often occurs during the period of slack water around high tide in order to prevent unsightly build-up of solid wastes). Alternatively,

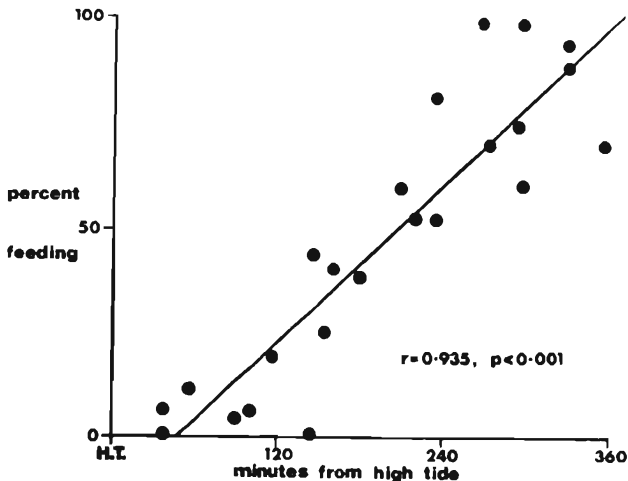


Figure 3. Relationship between the numbers of Goldeneye feeding and tidal conditions.

diving in shallower water at low tide may represent a more energy efficient means of obtaining food. Indeed, in very shallow water, Goldeneye have been observed to feed by dabbling (L. Campbell pers comm). However, other studies (eg Nilsson, 1970a; Campbell and Milne, 1977) have failed to observe any tide-dependent relationship in feeding activity.

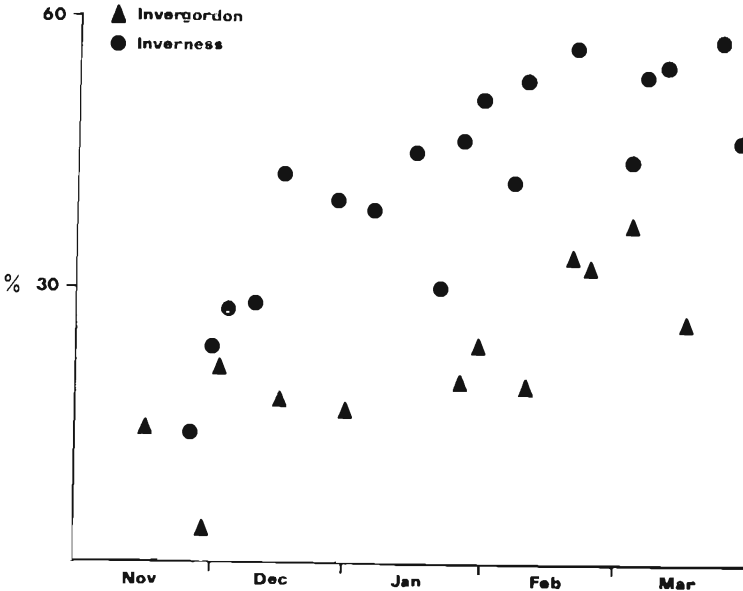
**Sex ratios** Sex ratios in Goldeneye flocks vary greatly between different areas (Nilsson, 1970; Pounder, 1976a; Campbell, 1977). The sex ratios at the two main sites are shown in Table 2. Elsewhere, away from these outfalls, adult males predominated. At Invergordon a consistently low proportion of males was present in the flock and this appears to be a regular feature (Pounder, 1976a; Mudge and Allen, 1980). At Inverness, however, the ratio between the sexes was more equal.

The reasons for regional variations in sex ratios have been discussed in the past. Nilsson (1970) suggested differential migration of the sexes though he also found differences in food seeking intensity between the sexes. Females showed a higher food seeking intensity and thus had a greater need to stay in shallower water where diving is more economic (Nilsson, 1970a). Pounder (1976a) suggested that the sexes might have different food requirements (females being more attracted to distillery wastes than males), whilst Campbell (1977) thought that shelter and freedom from disturbance might be contributory factors (females and immatures preferring more

**Table 2** Proportions of adult males in Goldeneye flocks at Invergordon and Inverness, 1981-82 and 1989-83

		Mean % Adult Males	Range	Sample size
Invergordon	1981-82	29.25	26.8-31.61	4
Invergordon	1982-83	23.58	3.6-36.9	12
Inverness	1981-82	52.23	35.3-75.2	4
Inverness	1982-83	44.82	13.8-57.6	20

sheltered areas). None of these suggestions would appear to explain the difference between the sex ratios at Invergordon-Dalmore and Inverness. Both sites are relatively sheltered and free from disturbance. At Inverness, where distillery wastes are discharged and the water is shallower, there is a lower proportion of females than at Invergordon-Dalmore, where little distillery waste is now discharged and the water is deeper. As yet, no satisfactory explanation can be put forward to explain these differences.



**Figure 4.** Proportions of adult males in Goldeneye flocks at Invergordon and Inverness, 1982-83.

At both sites there was some evidence of a seasonal change in sex ratios (Figure 4), with the proportion of males increasing throughout the winter and then declining at the end of March. Pounder (1976a) found that adult males arrived later and departed later than females on the Tay, but on the Forth Campbell (1977) found little variation throughout the winter. Nilsson (1970) showed that adult males left the breeding grounds later and returned earlier than females and immatures. This may in part explain the seasonal change in sex ratios observed at sites in the Moray Firth and on the Tay.

**Daily movements and roosting behaviour** Tide related behaviour was noted at several coastal sites, such as river mouths, where feeding took place inshore at low tide by groups of birds otherwise resting offshore. At Invergordon no consistent pattern was evident (cf Peterhead, Campbell and Milne, 1977) although Mudge (1978) had distinct morning and late afternoon peaks in numbers. When not feeding at the outfall, many rested a little way from the outfall, others flighted to Nigg and Udale Bays, whilst others probably commuted to inland lochs such as Loch Eye. No diurnal or tidal patterns of movement were recorded at Inverness.

The Goldeneye is normally considered to be a daytime feeder which roosts communally at night (Linsell, 1969; Campbell, 1977). However, in the Moray Firth this did not appear to be the case. Mudge (1978) observed Goldeneye feeding well into darkness at Invergordon and Burghead. In the present study the Inverness flock remained at the outfall throughout the night, either resting, or feeding when conditions were favourable.

### **Summary**

Aspects of behaviour and distribution of wintering Goldeneye in the Moray Firth are discussed. Declines in the numbers of wintering Goldeneye have been noticed and these can in part be related to improving effluent treatment practices. At the Longman outfall, feeding activity was closely related to tidal state. Sex ratios differed markedly at the two main sites and there was evidence of a seasonal change in the sex ratio at both these sites.

### **Acknowledgments**

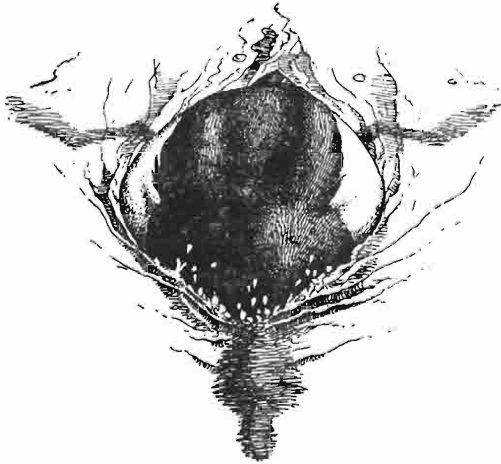
Our thanks to Lennox Campbell and Roy Dennis for helpful criticism of a draft of this paper. We are grateful to the Highland Regional Council, Invergordon Distilleries Ltd, Mackenzie Brothers, Dalmore, and Scottish Malt Distillers for information regarding changes in effluent discharges and to the Wildfowl Trust for count data. This paper draws on data collected as part of the environmental monitoring programme carried out for Britoil plc and its partners in the Beatrice oilfield, Kerr McGee Oil (UK) Ltd, Deminex UK Oil and Gas Ltd, London and Scottish Marine Oil Ltd, and Hunt Overseas Oil Inc, and their permission to publish this information is appreciated.



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## Storm Petrel ringing in Caithness

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### Introduction

Noss Head (58° 28' N; 3° 03' W) juts out into the North Sea on the east coast of Scotland, 18 km south of John O'Groats and 3 km north of Wick; from July to September, 1981 to 1984, Storm Petrels were tape-lured there for ringing. Thirty eight of the birds caught at Noss Head had already been ringed elsewhere and 34 birds ringed at Noss Head were subsequently caught (controlled) elsewhere. The information obtained from these 72 movements is presented here, together with other details of the birds examined.

### Methods

On several nights, between 23.00 and 0.300 hours, mostly from July to September (1981 to 1984), two mist nets were placed on the cliff top about 20m above sea level, 100 m south of the Noss Head lighthouse, at which spot the slope of the land provides a backdrop to the nets. In 1981 and June 1982, B.T.O. Storm Petrel tape-lures (the "churring" of breeding birds) were played on cassette recorders without amplification, one behind each net, but from July 1982 onwards one of the Storm Petrel tapes was replaced by a B.T.O. Leach's Petrel tape which also seemed to attract Storm Petrels.

Most birds were weighed (to the nearest 0.5g) and their wings measured (to nearest 0.5 mm). Three ringers took wing length measurements and regular checks showed that they usually obtained identical measurements. Brood patches were inspected on 248 birds and were classified as 'good' (with a large patch of bare skin) or 'poor' (substantial amounts of old down remaining and little bare skin). Attempts were made to keep records of all birds which regurgitated oil or food.

### Results

**Catches** The biggest catches were made between mid-July and the end of August. Three catching attempts in late June (1982) in ideal weather conditions (with 2 Storm Petrel tapes playing) proved fruitless, and birds were only caught between 5th of July and 6th of September, after which date wet, windy weather prevented attempts at netting. Nightly catches varied with the season and the weather; the highest was 89.

A Leach's Petrel tape was played from July 1982 along with a Storm Petrel tape and with this combination roughly



by the tape lures, birds were regularly seen approaching from the landward side; some Storm Petrels obviously take a "short-cut" across the headland.

**Controls** Seventeen Storm Petrels were controlled at Noss Head in the same year as they were ringed elsewhere, and 19 ringed at Noss Head were subsequently controlled elsewhere later in the same year. Fig. 1 shows the other capture site for all of these controls, including Runde, Heroy, Norway ( $62^{\circ}25'N$ ;  $5^{\circ}38'E$ ) where one bird was controlled 26 days later at a distance of 647 km from Noss Head.

The other British sites of these same-season controls were, for the most part, near breeding colonies in St Kilda, Priest Island, Fair Isle, the Orkneys and Shetlands, but 14 birds were tape-lured at sites not associated with colonies: three on the Isle of May, two at Holburn Head and nine at Strathy Point (the last two sites being on the north coast of mainland Scotland).

The time lapse between ringing and subsequent control ranged from three hours, for a bird ringed at Strathy Point and subsequently controlled 58 km away at Noss Head, to 53 days for another movement between Strathy Point and Noss Head. The time between ringing and control averaged 16.5 days for all same-season controls. Information relating to rapid movements (taking two days or less) is shown in Table 2.

**Table 2** Movements taking two days or less of Storm Petrels tape-lured at Noss Head, Caithness

Time between ringing and control	Other site of capture	Distance from Noss Head
3 hours	Strathy Point	58km
1 day	Strathy Point	58km
1 day	Strathy Point	58km
1 day	Sule Skerry	102km
1 day	Vatsetter, Yell	262km
2 days	Burravoe, Yell	255km
2 days	Priest Island	155km

The distances quoted from Noss Head (in Table 2) are straight line distances measured across land, but if it is assumed that Storm Petrels mostly travel over sea, then the distances become much greater, e.g. Strathy Point to Noss Head would be around 80 km and Priest Island to Noss Head around 215 km.

Thirty-six controls between seasons were recorded. Fig 2 shows the other capture site for all of these controls except for one at Runde, Heroy, Norway, two years after being



**Table 3** Biometrics of Storm Petrels which regurgitated oil on being handled compared with those which did not regurgitate

	Wing Length (mm) (mean $\pm$ S.D.)	No. measured	Weight (gm) (mean $\pm$ S.D.)	No. weighed
Regurgitated	123.0 $\pm$ 2.42	56	24.56 $\pm$ 1.61	829
Did not regurgitate	122.80 $\pm$ 2.53	841	24.08 $\pm$ 1.59	55

five and seven years earlier in Westray (Orkney) and Fair Isle respectively.

**Physical features** The biometrics of all Storm Petrels measured are presented in Table 3, and, for reasons explained in the ensuing discussion, birds which regurgitated oil are compared with those which did not. The small difference between the two wing length means is not statistically significant (t - test).

Those birds which regurgitated obviously lost weight and were consequently less heavy than the others. Sixty-four (6.3%) of the Storm Petrels caught regurgitated oil but no solid or semi-solid food.

From the sample of 248 birds examined for brood patches, 105 had substantial amounts of old down remaining and the other 143 had good brood patches with no vascularisation.

### Discussion

Quick, same-season controls of Storm Petrels have been shown by earlier workers to involve wandering non-breeding birds which first visit colonies at two or three years old and do so each summer (July and August being the period of greatest activity) until themselves breeding at four or five years old (Scott 1970, Mainwood 1976). Thus the 36 same-season controls indicate a high proportion of wandering non-breeders in the Noss Head catch.

From reference to Scott's findings (1970), that breeding birds usually regurgitated food when handled and had well vascularised brood patches, it may be inferred that the different-season controls probably also involved wandering non-breeders, for the 13 birds controlled at Noss Head one year after ringing did not regurgitate; they were probably non-breeders in at least their second year of wandering.

The seven Storm Petrels controlled at Noss Head two years after being ringed elsewhere when fully grown must have been at least four years old, since Storm Petrels do not visit land until they are at least two years old (Scott 1970). However, none of these birds regurgitated, and the two examined were found to have very small, poorly developed brood patches, so were probably still wandering non-breeders.

The two birds controlled at Noss Head five and seven years after being ringed were definitely old enough to be breeding birds but were probably failed breeders since such birds travel with non-breeders in late July or August (Scott 1970), and breeders, at colonies at least, are less likely to be attracted to tape-lures (Mainwood 1978, Furness and Baillie 1981, Fowler, Okill and Marshall 1982).

Earlier workers (Scott 1970, Furness and Baillie 1981) have shown that samples of probable breeders are on average both longer winged and heavier than samples containing mainly probable non-breeders. On the assumption that birds regurgitating oil are perhaps more likely to be breeding birds than others, the biometrics of the two classes are compared in Table 3, but it may be inferred from the almost identical wing length means that all birds belong to a homogeneous population; the evidence so far suggests a population of wandering non-breeders.

The mean weights of just over 24gm (Table 3) are noticeably lower than the weights of over 26gm generally recorded for breeding birds by earlier workers (Love 1978, Furness & Baillie 1981), further confirming the non-breeding status of the Noss Head catch.

Brood patch observations also point to a high proportion of wandering non-breeders; those with substantial amounts of old down remaining (105) must have been wandering non-breeders, but those with good brood patches and no vascularisation (143) could have been breeders or non-breeders, since Scott (1970) showed that some non-breeders passed through a bare phase in the brood patch during which they were indistinguishable from breeders as vascularisation in the latter rapidly receded away from the nest.

Some of the 64 birds found regurgitating oil were definitely non-breeders, for out of 35 regurgitating birds examined for brood patch, twelve had substantial amounts of old down remaining; furthermore, of the birds which regurgitated, three were subsequently involved in controls characteristic of wanderers, at Yell, Holburn Head and Lerwick, 2, 15 and 22 days respectively after being ringed at Noss Head. It may be concluded, therefore, that a small proportion (ca 6%) of wandering non-breeders regurgitated oil, but no food, when handled.

All the evidence available points to the Storm Petrels caught at Noss Head being wandering non-breeders accompanied by some failed breeders. The period of catching, July and August, coincides with the period of greatest wanderer activity (Scott

1970) and furthermore the number of retraps (three) is consistent with an ever-changing population.

It is not unreasonable to expect breeding birds to feed off Noss Head which is only 20 km from the nearest sites of proven breeding in the Pentland Firth (Sharrock 1978) and less than 50 km from sizeable colonies in the Orkneys, since adult birds may be expected to gather food in the sea within about 100 km of the nest (Lockley, 1983). Breeding birds could be at sea off the Noss Head area throughout June since other ringers have caught breeding birds at their colonies in mid-June (Love 1978), yet no birds could be tape-lured at Noss Head during this time, which agrees with the findings of Mainwood (1978) that breeding birds are virtually unaffected by tape lures.

The controls of birds from as far away as Cape Clear and Norway further demonstrate the wide range of these wandering birds and underline the full extent of the mixing of populations at this stage in the Storm Petrel's life cycle.

With similar inter-colony movements also recorded for Leach's Petrels (Love 1978) it is perhaps not surprising that three Leach's Petrels were tape-lured, for Noss Head is obviously well within the range of Leach's Petrels wandering, say between North Rona, Foula and Ramna Stacks where there are colonies (Love 1978, Fowler & Butler 1982).

### Acknowledgments

I would particularly like to thank Keith Banks, Stuart MacKay and Iain MacKay for their dedicated hard work throughout the long summer nights. Without their help with the erection of nets, extraction and processing of birds this study would have been impossible. I would further like to thank Keith for helpful comments on the first draft. I thank John Clark for computer help with the statistics and Mrs Anne Campbell for typing the manuscript.

### Summary

One thousand and twelve Storm Petrels and three Leach's Petrels were tape-lured at Noss Head, Caithness from 1981 to 1984; 72 of the Storm Petrels were controlled. Rapid controls, poorly developed brood patches, no regurgitation of food and relatively low weights imply that the Storm Petrels tape-lured at Noss Head were wandering non-breeders or failed breeders. A small proportion of non-breeding Storm Petrels regurgitated oil when handled.

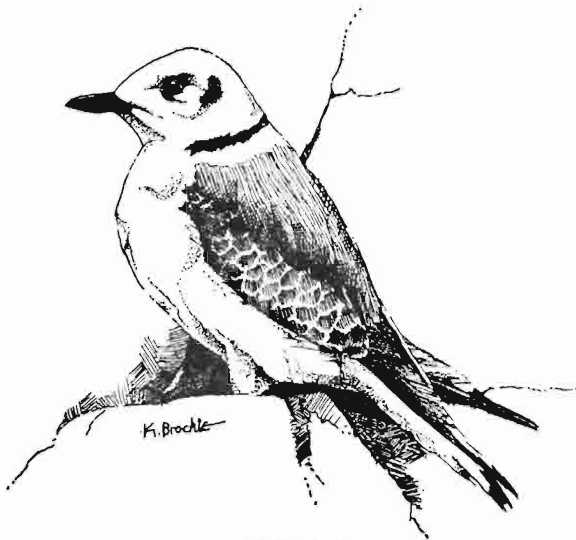
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KITTIWAKE

### Stop Press - Birds in Scotland

The publishers, T. & A. D. Poyser, have kindly provided a spare set of page proofs for promotional purposes. These will be available for inspection in the Bird Bookshop and at relevant conferences until the pre-publication offer closes on 15 March 1986. Sample pages will also be sent to Branch Secretaries, for display at meetings during the same period. We are most grateful to Trevor Poyser for giving potential purchasers this unusual opportunity to see what they will be getting before deciding whether or not to take up the members-only pre-publication offer.

## Counts of some breeding birds in two recently afforested areas of Kintyre

S. J. PETTY

This paper reports on a visit in 1983 to upland Kintyre, where substantial areas have recently been afforested. The object was to investigate the status of the Merlin, since concern has been expressed about the effects on Merlins of loss of breeding and foraging habitat resulting from both agricultural improvements and increased commercial afforestation in the uplands (Newton *et al.* 1978, Watson 1979, Williams 1981). The opportunity was also taken to record counts of other species usually associated with moorland habitats, prior to canopy closure of a large proportion of the planted area.

### Study areas and methods

The two study areas were situated on the Kintyre peninsula (Figure 1). That in South Kintyre Forest was centred around Lussa Loch, and that in Carradale around Gleann Drochaide and Barr Water. A high proportion of each area had recently been planted, much of it over the last three years in Carradale and over a longer period in South Kintyre (Table 1); in both areas the main tree species was Sitka spruce. The altitudinal range was similar in both areas. The two study areas, both owned by the Forestry Commission, were selected because they were the only blocks of ground where Merlins had been observed during the breeding season in recent years. (G. Heddon, pers. comm.).

The areas were searched primarily for Merlins, which have fairly rigid nesting habitat requirements. They either nest on the ground amongst heather, usually on a steep bank situated above a watercourse or around crags, or utilise the tree or crag nest of other species in similar situations, particularly those of Crows but also Ravens (Newton *et al.* 1978). Within the study area all the watercourses were walked, crags visited and suitable areas of heather checked for signs of Merlins. The search included old nests on crags or in broadleaved trees. Crows and Buzzards also nest on the edge of thicket-stage plantations where Merlins can use their old nests, therefore the perimeters of all the older blocks of conifers were also checked. Checking included searching suitable nesting areas for plucking posts and perching areas with signs such as moulted feathers, droppings, pellets and prey remains and

Table 1 Habitat characteristics of the two study areas

Habitat Features	South Kintyre		Carradale	
	Area ha	% area	Area ha	% area
Water and moorland	900	21	200	14
Forest planted 1960-1974	1000	24	-	-
Forest planted 1975 to date	2300	55	1200	86
Total area	4200		1400	
Altitude range	100-397 m		120-364 m	
Geology	Quartzose Mica Schist Chloritics & Epidotic Schists		Quartzose Mica Schist	

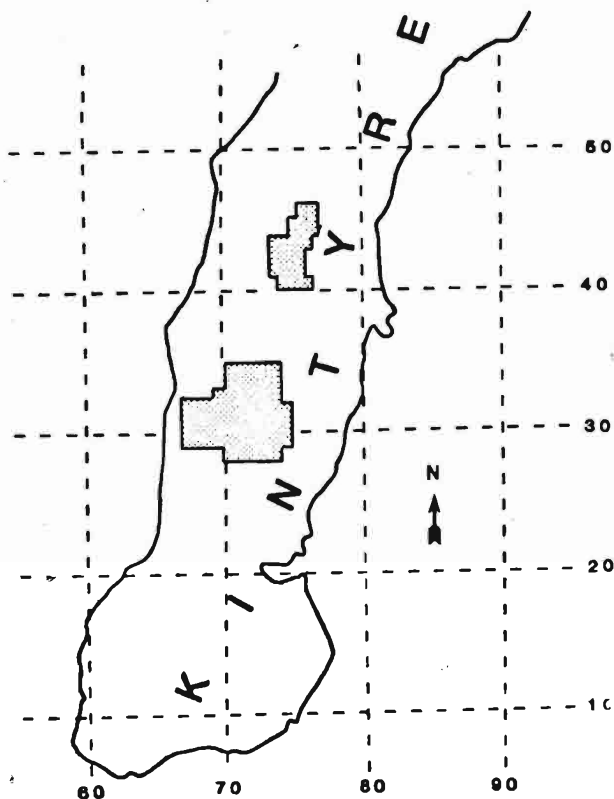


Fig. 1. The southern end of the Kintyre peninsula with the two study areas shaded: Carradale in the north and South Kintyre to the south. The national grid 10 km squares are also shown; these form part of the 100 km square NR.

then looking for nests if some of these signs were present. Merlins occupy breeding areas in March and April and generally commence egg laying in early to mid-May. By the time of this visit, on 23 to 26 May 1983, successful pairs should have been incubating. If pairs had failed prior to this visit then some signs should still have been present.

Sightings of all corvids, raptors and divers were recorded on a 1:50,000 map, together with the location of any active nesting area, ie. areas where a nest was found or where parental behaviour suggested that a nest was present. Additional landscape features such as lochans and derelict buildings were also checked. During the visit the weather, including visibility, was excellent.

### Results and discussion

The numbers of adult raptors, corvids and divers were recorded together with the numbers of active nesting areas (Table 2). These figures give a minimum population and may under-estimate the actual density. The abundance of Crows in Carradale probably relates to the close proximity of sheep-walk, to and from which most of the adult birds were seen flying, presumably to feed and to obtain food for the chicks present in most nests. The lack of small lochans and large crags may account for the lack of Red-throated Diver, Pere-

Table 2. Numbers and density of raptors, corvids and divers recorded in the two study areas

Species	South Kintyre			Carradale		
	Adult birds	Active nesting areas		Adult birds	Active nesting areas	
		Total	per 1000 ha		Total	per 1000 ha
Crow	14	7	1.7	12	8	6.7
Buzzard	19	6	1.4	2	1	0.8
Kestrel	8	5	1.2	2	0	0
Short-eared Owl	9	6	1.4	1	0	0
Hen Harrier	3	2	0.5	3	2	1.7
Barn Owl	2	1	0.2	0	0	0
Long-eared Owl	2	1	0.2	0	0	0
Golden Eagle	0	0	0	4	0	0
Peregrine	0	0	0	2	1	0.8
Raven	0	0	0	2	1	0.8
Red-throated Diver	0	0	0	6	3	2.5



PLATE 38a & b. Golden Eagle at the nest. The relationship between these magnificent birds and lambs can still cause controversy in some parts of the Highlands.

*B. S. Turner*





PLATE 39. Storm Petrel: a species that has attracted an increasing number of enthusiastic, nocturnal ringers in an attempt to elucidate the extent of its wanderings.

*B. Zonfrillo*

PLATE 40. Hen Sparrowhawk feeding young. A note on hunting behaviour is on p. 268.

*R. T. Smith*





PLATE 41. Oystercatcher, & PLATE 42, Lapwing at the nest. A note on one species laying in a nest of the other is on p. 270.

*A. D. Johnson*





*Left, PLATE 43.* Maxwell Kerr Hamilton 1915-85, Treasurer of the Scottish Ornithologists' Club from 1963-80. See p. 271.

*Drummond Young*

*Below, PLATE 44.* Turnstone, one of the more widely distributed waders in winter.

*R. J. Chandler*





grine and Raven in the South Kintyre area. Although a large proportion of each area had been recently afforested, most of the birds recorded were those usually associated with open habitats. This population structure will undoubtedly change once canopy closure occurs. The abundance of small-mammal predators in South Kintyre probably resulted from the increase in Field Voles which occurs soon after planting (Charles 1981). Fledged broods of both Long-eared and Short-eared Owls were observed, suggesting that egg laying had commenced in mid-March.

Though many apparently suitable nesting areas were present, breeding Merlins were not located in either study area, nor were hunting Merlins seen or any signs (such as the plucked remains of prey on fence posts and boulder tops) found. It seems unlikely that Merlins have already disappeared from these two areas as a result of afforestation, as the present growth stage of much of this young forest would tend to favour Merlins, due to the increase in passerine prey that occurs soon after planting (Moss 1979, Moss *et al.* 1979). The largest blocks of young forest have yet to reach the stage where they offer potential prey shelter from hunting Merlins. The complete lack of Merlins in this apparently suitable habitat suggests that the population on the rest of Kintyre would be sparse, if this species is present at all.

While little should be inferred from a short visit in a single year, the data presented do provide evidence of the relative abundance of groups of birds little covered in conventional upland bird censuses. While the densities are low it should be remembered that these are minimum figures and that the study areas comprised the high central backbone of the Kintyre peninsula and excluded any of the richer coastal strip. Many of the species recorded nest on or near the landscape features that were searched, and the densities recorded for these are likely to be reasonably accurate compared with those for Short-eared Owls, which may have nested on some of the plateaux between watercourses, and Long-eared Owls, which are difficult to locate during the day.

### Acknowledgements

I am grateful to Gordon Heddon for providing maps of the areas, information and help during my stay, and to Peter Strang for this assistance at Carradale. Judith Rowe and Fred Currie kindly commented on a draft of this paper.

### Summary

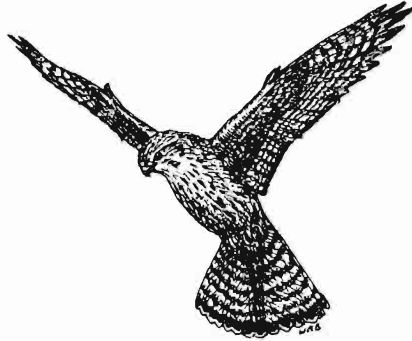
In two recently afforested areas in Kintyre, covering a total of 5,600 ha, no Merlins were located in 1983. Differences between the two areas in

densities of corvids, raptors and divers were probably associated with the relative availability of specific habitats, of prey and of carrion.

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## Golden Eagles and lambs in Badenoch, Highland

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Two adjacent pairs of Golden Eagles in Badenoch, Highland, were thought to kill lambs in 1984 and this was investigated. Criticisms of the estimates of damage made in 1984 led to further fieldwork at one nest in 1985.

### Study area and methods

The 12,000 ha study area, at 250-890 m elevation, was mainly heather moor and mountain. It included seven sheep farms and two crofting townships. Farmers provided information on 1984 sheep and lamb numbers. Lamb remains were looked for on the hill and at eagle nests, where other food was also recorded. Earlier work on eagle populations, and 1984 reports of eagles by residents, helped to outline the home ranges of the eagles. Wild prey populations were assessed from 20 years familiarity with the area.

### Results

**Golden Eagles** Birds in the traditional Territory One nested in the same tree in 1982-5; they failed during incubation 1982, did not lay 1983, reared one young in 1984, and two young in 1985. The cock was thought to be present from autumn 1981 and the hen from July 1982, to judge from unusual size or behaviour. Territory Two was occupied by unpaired birds for, probably, more than 20 years, but in 1984 a sub-adult cock and adult hen built an incomplete nest. It was not visited in 1985, when it was said that there was no nest. In March-August 1984, more than 100 sightings and reports attributed to the two pairs indicated that they hunted most of the study area, except for arable farmland and some woods. An 'intruding' eagle was identified once. Radio-telemetry and colour marking in the USA suggest that the ranges of neighbouring pairs tend to be mutually exclusive (McEaney & Lockhart, 1979).

**Potential 1984 lamb crop and losses** There were estimated to be about 7300 pregnant ewes (95% of 7700 present) in the study area. On a farm nearby, ultra-sound scanning in March indicated that there were 1.26 embryos/ewe and in September there were 0.97 lambs/ewe ( $n$  ewes = 725). This loss of 23% in the potential crop was thought to be unusually low for the district. Most study area farmers reported 0.9-1.0 saleable lambs/ewe. If two-thirds of mortality was before suckling (cf. Houston, 1977), then reasonable approximations for the study

area were 8000 embryos, 6300 suckling lambs and 5500 saleable lambs, a loss of 31% in the potential crop. Detailed studies in two West Highland districts indicated annual losses of 17-22% and 26% (Houston, 1977; Hewson, 1984).

About 80% of ewes were lambed on or near arable farmland and put to the hill about four weeks later. Almost all lambing was from 20 April to 30 May. On the nearby farm losses were mainly of suckling lambs which disappeared; 38% of twin lambs were lost compared with 14% of single lambs. Study area farmers thought that losses were mainly still-births or failures to suckle, non-traumatic losses of suckling lambs, or predation by Foxes. There were also road and rail casualties, and dogs killed 40 lambs in two incidents in 1984. Only two farmers considered that killing by eagles was important in 1984.

**Lambs eaten by eagles** In June-July 1984, a shepherd found three large, part-eaten lambs in the home range of the Territory Two eagles; eagles, or excreta and shed feathers, were found at all three. Pathological examination of one indicated some punctures consistent with post-mortem talon wounds, and that the lamb was dead or dying of *Pasteurella haemolytica* pneumonia and pleurisy before the attack (H. Ross, in litt). In April-June 1984, I examined remains of 19 part-eaten lambs on the hill; bruising and bleeding indicated that some had been killed but there were no eagle excreta or shed feathers at any.

**Table 1** Notes on nine lambs at Badenoch Territory One  
Golden Eagle nests 1982 and 1985

Year and approx. date taken	State of remains	Indications of development, death cause
1982, early April	half complete	had walked. bruising/bleeding at strike marks, shoulder base to nape, killed by eagle
1982, mid April	half complete	had walked. bruising/bleeding at strike marks, nape to skull. killed by eagle
1984, late April	skin and wool	no determination possible. small
1984, early May	skin and wool	no determination possible. small
1984, mid May	hind leg	had grown. had bled. killed by unknown predator
1985, late May	fore leg	had walked. no bleeding. possibly taken dead
1985, mid-late May	hind leg	had walked. had bled. killed by unknown predator
1985, mid-late May	skin and wool	no determination possible. small
1985, mid-late May	skin, wool part skull	had grown. no bleeding, possibly taken dead

By contrast, at least two of nine lambs at Territory One nests in 1982, 1984, and 1985 had been killed by eagles (Table 1). All were small lambs, almost all brought in during the main lambing period. In 1982 lambs were brought during incubation, but in 1984-5 the eagle chicks hatched before lambing began (about 12-15 April). Lambs were brought when almost all hunting was probably by the cock. At least six lambs had ruptured hoof membranes or had grown, so that they had walked or suckled. At Territory One nests no lambs were found in 1972, when there was a different pair, nor in 1983 when the present pair did not lay. No lambs were found at the Territory Two nest in 1984.

**Wild prey** The study area was mainly 'hind forest' with an annual cull of about 200 Red Deer. There was a substantial calf crop, and some spring-summer carrion. With some feral goats and Roe Deer calving on the hill, young wild ungulates might have been 5-10% of lamb numbers. Rabbits and Brown Hares were scarce on the hill and the last major peak in Mountain Hare numbers was in 1957. Between about 1960 and 1980, Red Grouse numbers declined so much that all five sporting estates largely or entirely ceased to shoot them by driving. Ptarmigan were cyclically common on two estates. Over the last 20 years, Black Grouse and Capercaillie became uncommon and very rare, respectively. Thus most wild prey declined markedly over 15-30 years.

**Eagle diet** March-July remains and pellets indicated that Red Grouse was the most frequent item, followed by Mountain Hare and lamb, although hares and lambs were probably more important by weight (Table 2). The few data for Territory Two included no lamb, although these birds were seen eating lamb (above). In Territory One in 1982-5, lamb was 41% of remains and 14% of occurrences in pellets. Fresh remains tend to exaggerate the importance of lamb (Lockie, 1964) but it was clearly an important food of this pair.

## Discussion

Basing estimates on Brown & Watson (1964), the study area eagles would take about 190 kg of food, in April-July 1984 (when lambs were available); this figure allows for 25% waste. If lamb was 10-40% of food by weight, then 19-75 kg of lamb would be taken. Eagles tend to eat 2-4 kg per lamb (Weir, 1973), suggesting that they fed on 5-40 lambs. Because it was known that they fed on at least six, 10-40 lambs was the estimate used here.

In 1982-85 eagles had killed two to nine of 12 lambs examin-

**Table 2** Food remains and pellet contents at nests in Badenoch Golden Eagle Territories One and Two in 1972, 1982, 1984 and 1985

Fresh remains						
Food Type	A	B	C	D	E	total (%)
Non-passerines, except game	0	1	1	1	0	3(7)
Gamebird	8	0	4	3	4	16(39)
Passerines	0	0	0	0	0	0
Voies	0	0	0	0	0	0
Lagomorphs	3	0	1	1	1	6(15)
Young wild ungulates	2	0	0	0	0	2(5)
Large ungulate carrion	1	0	1	0	0	2(5)
Lambs	0	2	3	4	0	9(22)
totals	14	3	10	9	5	41 items

Recent pellets				
Food Type	F	G	H	total (%)
Non-passerines, except game	0	0	0	0
Gamebirds	18	12	3	33(44)
Passerines	1	0	0	1(1)
Voies	2	0	2	4(5)
Lagomorphs	14	5	4	23(31)
Young wild ungulates	1	1	0	2(3)
Large ungulate carrion	0	2	1	3(4)
Lambs	5	4	0	9(12)
totals	41 (28)	24 (16)	10 (7)	75 occurrences (51 whole/part pellets)

Food species : Grey Heron, Teal, Red Grouse, Ptarmigan, Black Grouse, Meadow Pipit, Short-tailed Vole, Water Vole, Mountain Hare, Brown Hare, Rabbit, feral goat (carrion, kid), Red Deer (carrion, calf), Sheep (carrion, lamb).

Territory, collection date : Territory One—A 6/5-12/7/72; B 10/4-15/4/82; C 13/5-9/84; D 5/6/85; F 13/5-16/7/84; G 5/6/85. Territory Two—E 19/5/84; H 19/5-13/6/84.

ed and on which they had fed. Based on this, they might have killed 2-30 lambs in 1984, at worst accounting for 4% of the estimated 800 deaths among suckling lambs. However, they might have killed a much higher proportion of the 20% of lambs which were born on the hill. Eagles usually take prey of 0.5-4.0 kg, and lambs in the first week of life (Tjernberg, 1981; Hewson, 1984). In Badenoch only the hill-born lambs were available to them while small; at worst, eagles might have killed roughly 30 of 160 suckling, hill-born lambs which died (about 19%). Most hill-born lambs were on crofters' grazings, in the home range of Territory One eagles.

Probably, the Territory One cock brought in small lambs

each time the pair bred, from about the hatching date. Probably, many were crofters' lambs which were common within the hunting range whereas wild prey was scarce. Complaints would have been justifiable but were not made; 1984 complaints were for farms in the hunting range of the other pair. If complaints were made for farms in the range of the Territory One pair, licensed killing or chick removal might be sought; this might need to be repeated in future years. It might be better to pay compensation temporarily, subject to phasing out the lambing of ewes on the hill—which might reduce other lamb losses too. Finally, this inconclusive investigation probably cost more than the value of lambs taken.

### Acknowledgments

I thank the farmers, shepherds and stalkers of the area for all their help. H. Ross, the North of Scotland College of Agriculture, kindly examined a dead lamb. Drs A. Watson and R. Hewson valuably criticized drafts of the paper. The Director, U.S. Dept. of the Interior, Denver Wildlife Research Center, kindly allowed me to cite unpublished data. I was Speyside Representative of the Scottish Wildlife Trust when the study was made but the views expressed are mine.

### Summary

In 1984 two pairs of Golden Eagles hunted nine sheep farms in Badenoch, Highland, where a potential crop of about 8000 embryos in March was reduced to about 5500 saleable lambs in September. Eagles probably killed 2-30 lambs and fed on 10-40. All kills might have been by one cock, and from the 20% of lambs which were born on the hill. Dogs killed more lambs than eagles did.

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Douglas Weir, 2 Belvedere Park,  
Edinburgh EH6 4LR

## Short Notes

### Unusual method of killing prey by Sparrowhawk

On 21 December 1984, at Hamilton Low Parks (Lanarkshire), a distress call was heard from a clump of Rhododendron. An adult male Sparrowhawk emerged clutching a male Blackbird which was struggling violently. The Sparrowhawk flew to a puddle, about 100 m distant, where it pitched down into the water, completely immersing the Blackbird, and itself, sitting belly-deep. After approximately half a minute the Sparrowhawk flew, still clutching the Blackbird which continued to struggle. Thereupon, the Sparrowhawk returned to the pool, once more sitting on the immersed Blackbird, for about one minute, before flying off. This time the Blackbird appeared lifeless, no longer struggling. The pool was approximately 22.5 cm deep at its maximum.

Ian Newton states in his book that larger items of prey taken by Sparrowhawks are often not immediately killed but die during plucking. No other mention was found in available literature of this unusual but effective method of despatching proportionately large prey. However killing of prey cannot be a sequence of events which is often witnessed.

B J. BROADLEY

### Dipper with one leg

On 2 January 1985, while ringing Dippers in South Ayrshire, I caught a Dipper with only one leg, the other amputated at the tarsal joint. The bird was recaptured on 25 January. Its weight (64 gms) was normal for the season; it was sexed as a female.

This disability is quite commonly reported for a wide range of species and appears to have small effect on survival. However the semi-aquatic lifestyle of the Dipper and in particular its reputed underwater locomotion makes survival with this injury appear unusual. There has long been discussion on underwater 'walking' by Dippers where fast flowing water is advantageously used to maintain position on the stream bed, leaving the legs free for locomotion. This ability is widely accepted. W. R. Goodge, conducting laboratory observations on locomotion in the North American Dipper (*Cinclus mexicanus*), concluded that wing movements were essential to maintain position and also for propulsion. The conclusion in the case of this Dipper is that wing movements must have been essential for survival.

B. J. BROADLEY

### Reference

GOODGE, W. R. 1959. Locomotion and other behaviour of the Dipper. *The Condor* 61: 4-17.

### Waders wintering on Colonsay and Oransay

The islands of Colonsay and Oransay lie 17 km south of Mull and 10 km north-west of Islay and like many of the other Hebridean islands have been little studied by ornithologists, particularly in winter. Attention has recently been drawn to the important populations of waders wintering on the machair and beaches of the Outer Hebrides (Buxton, 1982a, 1982b). Small but significant areas of similar habitat are found on the southern and western seaboard of Colonsay and Oransay and these are supplemented by the considerable area of tidal mudflat on "The Strand" which joins the two islands at low tide.



During 6-17 January 1984 the islands were surveyed for the BTO Winter Atlas and local concentrations of waders were found. Two visits, one during 14-28th December 1984 and the other 18-25 January 1985, for the WSG Census added to the information. The data from these counts are presented in Table 1 along with maximum passage numbers, based on the authors' observations on visits since 1975, and the only available figures in the literature for the islands—some estimates made by Reed *et al* (1983) of likely wintering and passage populations.

From these figures the two islands would appear to be of greater local importance for wintering waders than previously suspected and may together qualify as a site of national importance for wintering Ringed Plover.

### References

- BUXTON, N. E. 1982a. Wintering coastal waders of Lewis and Harris, *Scot. Birds* 12: 38-43 ■ BUXTON, N. E. 1982b. Wintering waders on the Atlantic Shores of the Uists and Benbecula, *Scot. Birds* 12: 106-113 ■ REED, T. M., CURRIE, A. and LOVE, J. A. 1983. Birds of the Inner Hebrides. *Proc. Royal Soc. Edin.* 83B: 449-472.

D. C. JARDINE, J. CLARKE & P. M. CLARKE

**Table 1** Total numbers of waders found on Colonsay and Oransay, Argyll

	Passage				
	6-17 Jan 1984	14-28 Dec 1984	18-25 Jan 1985	Max since 1975	Reed <i>et al</i> (1983)*
Oystercatcher	132	334	249	161	25-50
Ringed Plover	112	264	140	241	25-50
Golden Plover	20		7	167	5-10
Grey Plover	1	3	5	16	
Lapwing	168	240	164	567	25-50
Knot			6	3	5-10
Sanderling				45	
Purple Sandpiper	9	20	41	18	5-10
Dunlin	60	120	147	50	25-50
Jack Snipe			2	1	SV
Snipe	8+	c50	30	30	5-10
Woodcock		10	6	( )	5-10
Bar-tailed Godwit	1	13	17	10	5-10
Whimbrel	1			16	PV
Curlew	102	322	184	100	25-50
Redshank	9	77	28	40	
Greenshank	4	11	4	12	5-10
Common Sandpiper				60	ND
Turnstone	49	71	209	50	5-10

\*Brackets indicate species not counted. Figures for Reed *et al* are minimum and maximum. SV - Scarce Visitor, PV - Passage Visitor, ND - No Data.

Other wader species recorded on Colonsay and Oransay include: Killdeer\*\*, Little Stint, Curlew Sandpiper, Ruff, Black-tailed Godwit, Green Sandpiper, Phalarope sp.

\*\*subject to acceptance by BBRC.

### Oystercatcher laying in Lapwing nest

On 14th May 1984, in a field near Wellbank by Dundee, I watched an Oystercatcher laying an egg in the nest of a Lapwing. It did this while being threatened by both male and female Lapwings. Once the Oystercatcher had left the area and the female Lapwing had reclaimed her nest, I decided to take a closer look. The nest contained four Lapwing eggs and one Oystercatcher's. I returned to the site each day for three days, during which the female Lapwing continued to incubate, but on the fourth day I found that the entire clutch had been removed, possibly by egg collectors.

M. PURVEY

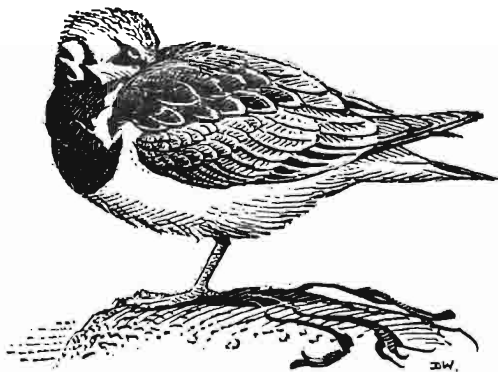
### Interaction between Marsh Harrier and Roe Deer

I read with interest the note (12: 162) on a Golden Eagle interacting with a roe deer in Deeside. I have seen similar behaviour in Galloway involving an immature Marsh Harrier and roe deer.

On 28th May 1983 at 1535 hours the harrier was hunting a marshy area before landing on a grassy mound near a feeding adult roe deer with her fawn. The deer looked up and ran towards the harrier with the fawn at its side and stopped about 5-6 m. away from the harrier. The harrier flew up, circled and twice hovered above the heads of the deer as they looked up at it, before landing on the grassy mound again. The deer approached closer, whereupon the harrier flew up, hovering just above them, and making short swoops on the fawn before landing. Again the harrier flew up, hovering above the fawn now with lowered talons, whereupon the adult deer twice lunged at it, kicking out with her fore-legs. The harrier continued to show a sporadic interest in the deer, hovering above them until it lost interest and landed at 1620 hours.

Although a roe deer would be too large a prey species for the harrier, the interest shown in the fawn was enough to elicit a positive offensive reaction, as would be expected, from the adult roe deer.

R. C. DICKSON



TURNSTONE

## Maxwell Kerr Hamilton 1915 - 1985

With the death of Maxwell Hamilton on 14 October 1985, the Scottish Ornithologists' Club lost a founder member and one who had given great service to the club in several capacities. His early interest in birds led him to join the Midlothian Ornithological Club when it was formed in 1933; its sole objective was the serious study of birds. He was among those who, in 1934, helped to found Britain's first co-operatively manned bird observatory—on the Isle of May—and made regular visits to the island before the war. In 1945, while still on war service, he obtained special permission to go to the May and wrote a comprehensive account of his visit. He took particular pleasure in being able to attend the Observatory's Jubilee Dinner celebration in 1984.

Maxwell qualified as a Chartered Accountant in Edinburgh in 1939 and then saw active service in the Royal Navy during the war, in the course of which he was Mentioned in Dispatches. His service took him to the Middle and Far East and, while in India, he met and married his wife Helmy. After the war he worked for some years in Sweden, his wife's home country.

When he returned to Scotland in the early 1960s Maxwell renewed his ornithological contacts and soon became involved in the affairs of the club. In 1963 he was elected Honorary Treasurer, a post he held until 1980. During those seventeen years his work as Treasurer increased considerably, due primarily to the expansion of the Bird Bookshop in which sales rose from £1200 in 1963 to £78,000 in 1980. He was therefore responsible for advising council on financial matters during a most important period of the club's development, and successive Presidents relied on his sound judgment.

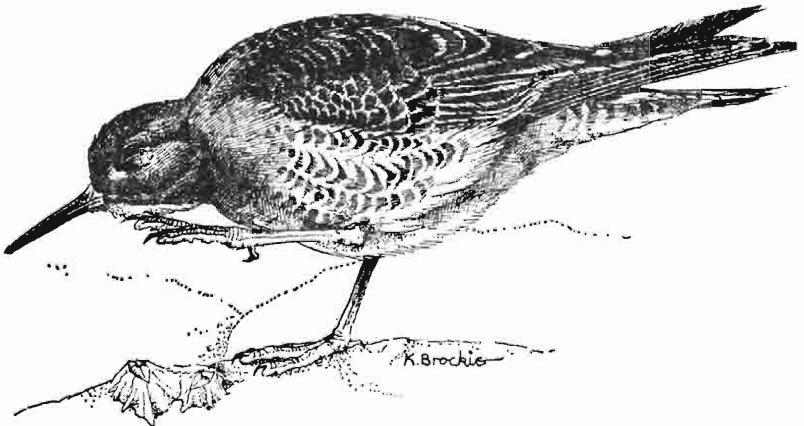
During this time, from 1968-77, he was chairman of the club's important Management Committee; it is responsible for making recommendations to council on matters of policy and administration, and for dealing with urgent matters arising between council meetings. From 1966-69 he was chairman of the Edinburgh Branch, and for many years chaired the Edinburgh Discussion Group with great enthusiasm. This Group consisted mainly of members active in the field, and it organised surveys and enquiries in the Lothian area. All these activities Maxwell undertook willingly and cheerfully and, on relinquishing his work as Honorary Treasurer in 1980, he was elected an Honorary Member in recognition of his great service to the club.

During these years he naturally had his own accountancy work to attend to, including directorship of companies and societies, but somehow he found time to become involved in other natural history activities. He joined the Scottish Wildlife Trust on its formation in 1964, and was elected one of its Vice-Chairmen in 1970. In 1978 he succeeded Sir Charles Connell, and became the Trust's second Chairman until he handed over this responsible position in 1981.

Maxwell was a quiet and dedicated man with a fine and dry sense of humour. Many will remember his attachment to his pipe which he puffed assiduously during meetings; frequently it went out, as evidenced by a mounting pile of matchsticks, but re-lighting it gave him time to ponder the answer to some difficult question. He was firm when occasion demanded and, though some may have disagreed with him at times, his suggestions generally prevailed.

Maxwell was very much a family man and took great pleasure in the company of his two daughters and five grandchildren. To them, and in particular to his wife, Helmy, who sustained him through his long illness, we extend our deepest sympathy. We have lost a man who was dedicated to his family, his work and our club.

ALASTAIR D. PEIRSE-DUNCOMBE



PURPLE SANDPIPER

## Reviews

**A Dictionary of Birds** Edited by Campbell, B. & Lack, E. T. & A. D. Poyser; 670 pp; 500 illus; £35 until 30 September, then £39.00

Have you ever wondered what sort of bird was a cochoa, a donacibius, a hawk eagle, a peep, or a rainbow bird? Have you ever wanted to know what birds were members of the Apodi, Indicatoridae, Otididae, Sphenisciformes, or Xenicidae? Have you ever wished to know more about broadbills, divers, gulls, megapodes, or sparrows? Have you ever wanted to know the meaning of the terms altricial, columella auris, feral, over-shooting or syndactyly? Have you ever wished to read a brief but comprehensive account of biostatistics, falconry, migration, birds as pests, or vocalizations? If so, this is the book for you—indeed, it is the book for any serious ornithologist.

The editors have done a fine job in bringing up-to-date Landsborough Thomson's *A New Dictionary of Birds*. Like Thomson, they have used their experience and knowledge not only to write, or rewrite, many entries but also to bring together a team of specialists to write the rest. By careful editing they have ensured that the contributions are both concise and clear; by extensive cross-referencing they have made it easy for one to trace through subjects about which one has little previous knowledge. The carefully chosen illustrations support the text well. The book is well-designed, much less bulky than its predecessor and not unwieldy to handle—despite the hugeness of its contents.

I would place this book second only to a good identification guide in any ornithologist's library. Fortunately, the publishers have held the price low enough for people to afford to buy it. I am even considering the purchase of a second copy, for I shall need to consult it both at home and at work.

JEREMY J. D. GREENWOOD

**A Guide to the Birds of Nepal** by C. & T. Inskipp; Croom Helm; 1985; 392 pp; many maps & b. & w. drawings; £25.00.

This is not a field guide. The authors' main aim was to describe and map the distribution of birds in Nepal, and that takes up three-quarters of the book. Most descriptions are accompanied by a small sketch of the bird. The introductory chapters are helpful for anyone planning a bird watching trip to Nepal; one deals with areas to visit and their specialities, another describes in detail some of the more difficult species, accompanied by drawings and 8 colour plates. This is a useful contribution to the literature on Asian bird distribution, and my criticisms are concerned mainly with presentation. The general layout and typeface are unattractive. The typeface used for the index is too reduced and chapters are not clearly headed or separated. The overall impression is more that of a well-researched report (602 references) than of an expensive book, which is too bulky to take to Nepal. One tenth of the world's birds have been recorded in Nepal and a good field guide is long overdue. A combination of the text from Fleming's *Birds of Nepal*, simplified maps and salient identification features of difficult birds from the Inskipp's book and a new set of illustrations on good quality paper, would be a winner. The Inskipp's book, good though it is, may be a bit premature, and at £25, unlikely to have wide appeal.

N. PICOZZI

**ITEMS OF SCOTTISH INTEREST** Articles and reports on birds in Scotland, mainly on status and distribution. References from the widely available *British Birds*, *Bird Study* and *Ringing and Migration* are excluded. The items listed are available in the Waterston Library for reference. The librarian would be glad to receive reprints or copies of papers on any aspect of ornithology.

*Argyll Bird Report* 1984 (86 pp). C. A. Galbraith (ed) 1985. In addition to the usual species list and ringing report, it has short papers on Tawny Owls in spruce forests, Greenland White-fronted Goose roost sites, heronry survey, and birds of the Oban area. Available from the editor, 4 Achnagoll, Minard, Inveraray, Argyll for £3 post free.

*Caithness Bird Report* 1984 (35 pp). Available from the SOC Bird Bookshop, £2 post free to SOC members.

*Fife and Kinross Bird Report* 1984 (28 pp). D. Dickson & C. Smout (eds) 1985. Includes short reports on the 1984 Ringed Plover survey and on birdwatching on the Lomond Hills. Available from the SOC Bird Bookshop, £1.20 post free to SOC members.

Lifetime reproductive output of female Sparrowhawks. I. Newton 1985. *J. Anim. Ecol.* 54: 241-253. Based on extended studies in south Scotland from 1971 to 1983.

## Notices

**Whooper Swan Census, January 1986** A recent estimate that the post-breeding population of Whooper Swans in Iceland numbers as many as 10-11,000 (*Wildfowl* 35: 37-47) has prompted the Wildfowl Trust to organise a census of Whooper Swans in Britain and Ireland for the weekend of January 11th/12th 1986. It is hoped that full coverage will be achieved. Anyone who would like to take part is asked to contact their regional wildfowl count organiser (see list below) or David Salmon at the Wildfowl Trust, Slimbridge, Gloucester, GL2 7BT.

**Shetland** D. P. P. Eva, 6 Westerloch Brae, Lerwick.

**Orkney** P. Reynolds, Berrybank, Evie, Orkney.

**Wester Ross and Skye** A. Currie, Glaiseilean, Broadford, Isle of Skye IV49 9AQ.

**Outer Hebrides** Vacant - contact Wildfowl Trust.

**Caithness** S. Laybourne, Old Schoolhouse, Harpsdale, Halkirk, Caithness KW12 6UN.

**Inverness-shire, Easter Ross, Sutherland (East)** R. H. Dennis, Landberg, North Kessock, Inverness IV1 4XD.

**Banffshire, Morayshire, Nairnshire** J. Edelsten, 12 Durn Avenue, Portsoy, Banffshire.

**Aberdeenshire, Kincardineshire** A. Duncan, 12 Cairncry Avenue, Aberdeen AB2 5DS.

**Angus** B. Pounder, 64 Forfar Road, Dundee, Angus.

**Perthshire (East)** E. D. Cameron, Strathclyde, 14 Union Road, Scone, Perth PH2 6RZ.

**Argyllshire and Inner Hebrides (South)** S. Newton, 7 Strathmiglo Place, Place, Stenhousemuir, Stirling FK5 4UQ.

**Fife, Kinross-shire** Mrs J. A. R. Grant, Brackmont, Crail, Fife.

**Central Region** D. Thorogood, 4 Archers Avenue, Stirling FK7 7RJ.

**Bute** J. B. Simpson, Estate Office, Rothesay, Bute.

**Dunbartonshire and Renfrewshire** A. Young, 76 Liddel Road, Ravenswood, Cumbernauld G67 1JE.

**Strathclyde South East** A. Wood, 47 Kilbowie Road, South Carbrain, Cumbernauld G67 2PZ.

**Lothians** Miss J. Wilcox, 18 Howdenhall Gardens, Edinburgh EH16 6UN.  
**Ayrshire** A. G. Stewart, 31 St Andrews Avenue, Prestwick, Ayrshire KA9 2DY.

**Borders** A. Bramhall, 28 Blakehope Court, Tweedbank, Galashiels, Selkirkshire TD1 3RB.

**Dumfriesshire, Kirkcudbright, Wigtownshire** P. Shimmings, 5 Broomhouse Road, Lockerbibe, Dumfriesshire DG11 2LX.

**Tagged Common Seals** As part of a study of their distribution and behaviour, a number of common seals have been marked in Orkney. Each seal has a flipper tag, and some also have fur marks or radio transmitters. White and yellow sheep eartags are used, each with a two digit number (12 mm high) on the outside, and placed in one or both hind flippers. Fur marks are either orange, red or lime-green, and are of a variety of shapes and sizes, normally on the back and/or head. Radio transmitters are glued to the fur on the head or back, and are the same colours as the fur marks with a 34 cm whip aerial. Any records of marked individuals, dead or alive, would be gratefully appreciated. Even if the tag number can't be read, details of any sightings are still useful. Please send any records, or write for more details of the marking scheme, to : **Paul Thompson, Barebrecks Cottage, Burness Road, Firth, Orkney KW17 2ET.**

**The 19th International Ornithological Congress** will be held in Ottawa, Canada, from 22 to 29 June 1986. The deadline for registration and submission of contributed papers is January 1986. Further information and registration forms are available from **Dr H. Ouellet, Sec. Gen. XIX Congressus Internationalis Ornithologicus, National Museum of Natural Sciences, Ottawa, Ontario, Canada K1A 0M8.**

**Raptor Organization Registry** The American Raptor Research Foundation plans to prepare a Directory of Raptor Organizations of the World, the aim being to have available in one document details of all organisations whose major purpose is to deal with some aspect of the life of raptors. Officers of relevant organisations can obtain further information from **R. J. Clark, Raptor Research Foundation Inc., Dept. of Biology, York College of Pennsylvania, York, PA 17403-3426 USA.**

**Operation Wildlife** is a new quarterly magazine containing news and articles of interest to naturalists and conservationists. It is available by subscription only and contributions are invited. Further details from **D. H. Reed, c/o The Old Vicarage, Great Barford, Bedford MK44 3JJ.**

**Important Notice** There have been several late changes to the list of local recorders given on pages 278-279. Full details will be found in **SBR 1984.**

## The Scottish Ornithologists' Club

### JUBILEE RECEPTION

The fiftieth anniversary of the founding of the Scottish Ornithologists' Club will be celebrated by a reception to be held in the Kelvingrove Museum, Glasgow, on the evening of Friday, 21 March 1986. Besides celebrating 50 years of Scottish ornithology, the reception will also launch the publication of "Birds in Scotland" by Valerie Thom. (See below for details of the pre-publication offer). The SOC Council warmly invites all Club members to the Reception and book launch. Tickets are available from Hector Galbraith (Glasgow Branch Chairman), 96 Neilston Road, Paisley, Renfrewshire PA2 6EJ, (041-887-5499). Tickets are £5.00 and include the cost of a buffet and wine.

### BIRDS IN SCOTLAND

This new book by Valerie Thom and sponsored by the SOC will be published by Poysers on 24 March 1986. Details of an exclusive pre-publication offer to Club members are enclosed with this issue of the journal. Club members may order one copy each at £19.00 saving £5.00 off the publication price of £24.00. Copies of the book will be posted to members on publication (postage and packing free of charge) or they may collect their copy and have it signed by Valerie Thom at the Jubilee Reception (see above).

### SCOTTISH BIRDWATCHERS' CONFERENCE 1986

Next year's Spring one-day conference organised by the SOC and BTO will be held on Saturday, 5 April 1986, at the University of Aberdeen. Speakers will include Dr Ian Newton (ITE) on Sparrowhawks and Dr Mike Moser (BTO) on the Winter Shorebird Count in Scotland. The SOC Bird Bookshop and the BTO Shop will be at the Conference. Ian Newton's new book "The Sparrowhawk" may be available at the Conference. The charge for the Conference is £9.00 per person including lunch. Further details of the programme and a booking form are available from Miss Pat Webster, SOC, 21 Regent Terrace, Edinburgh EH7 5BT.

### REDESIGNED EMBLEM

Keith Brockie, the well-known young Scottish wildlife artist, author and Club member, has drawn the new Crested Tit emblem. The Bird Bookshop is already using the new emblem in its promotional material and the new bird features on the new envelope (of re-cycled paper) used to post the journal. The new Crested Tit will feature more prominently during Jubilee Year when new ties, badges and car stickers will become available. We are very grateful to Keith for his excellent drawing.

### SCOTTISH BIRD REPORT 1984

The 1984 SBR, edited by Angus Hogg, was published in November. Copies are available, price £2.50 (inc post & pack), from SOC (SBR 1984), 21 Regent Terrace, Edinburgh EH7 5BT.

### SCOTTISH BIRD REPORT 1985

Observers are reminded that all records for 1985 should be sent to the local recorders (listed on page 278) by the end of January 1986. This will enable the recorders, compilers and the editor of the SBR to include



the *SBR* 1985 with the Winter 1986 issue of the new *Scottish Birds*.. The editor invites the submission of black & white prints or colour transparencies of rare or uncommon birds taken in Scotland in 1985, together with any line drawings of Scottish birds. Remember, the *SBR* is your report, please give it your full support by being prompt with the submission of your records—Angus Hogg, Editor *SBR*, Kirklea, Crosshill, Maybole, Ayrshire KA19 7RJ.

### INDEX, VOLUME 13

The Index to Volume 13 of *Scottish Birds* will be published in 1986 and sent free of charge to all Club members and subscribers.

### ENDOWMENT FUND GRANTS

The closing date for applications for 1986 grants is 31 December 1985. Application forms are obtainable from John Davies, SOC, 21 Regent Terrace, Edinburgh EH7 5BT.

### SOC TRIP TO ISRAEL

Following an enjoyable visit to Israel last spring by John Davies (Club Secretary) as a guest of the Society for the Protection of Nature in Israel, a trip is being arranged for Edinburgh Branch members and any other Club members who are interested. Israel offers some of the best bird-watching in the Western Palearctic with a rich indigenous avifauna and a spectacular spring migration. This, combined with diverse scenery and numerous historic/biblical sites, will make a memorable holiday. The trip is being led by Alan Brown, recorder for East Lothian and member of the Scottish Bird Records Committee. Further information, including details of the itinerary, the birds to be seen, the travel and accommodation arrangements as well as the very competitive costs are available from Alan Brown, 23 King's Court, Longniddry, East Lothian EH32 0QP. Telephone 0875 - 52413.

### GLASGOW BRANCH CHEESE & WINE PARTY

Glasgow Branch invites all SOC members and their friends to attend their cheese and wine party on Wednesday, 19th February 1986. Wine, food, quizzes, prizes, what more could you ask? All for the astoundingly low price of only £3. The venue is Kelvingrove Museum, Dumbarton Rd., and the time 7 p.m. Tickets are available from Hector Galbraith, 96 Neilston Rd., Paisley PA2 6EJ (SAE).

### SOC JUBILEE CRUISES

Two special cruises have been arranged for Club members for the spring of 1986 visiting some of the remoter Scottish islands, particularly those which have large seabird colonies. The Dutch expedition ship *PLANCIUS*, which carries 26 passengers in fairly simple accommodation, is being chartered. The aim will be to land on most of the islands mentioned below for 2 to 4 hours. The exact programme will be subject to weather conditions but will probably be as follows:

**Cruise A.** 14th to 23rd May, from Leith to Greenock. Leader, John Arnott. Bass Rock, Hoy, Westray, Papa Westray, Fair Isle, Mousa, Noss, Fetlar, Out Skerries, Hermaness, Foula, St Kilda, Canna, Greenock.

**Cruise B** 24th May to 2nd June, from Greenock to Aberdeen. Leader, Bobby Tulloch. Canna, St Kilda, Foula, Hermaness, Fetlar, Out Skerries, Noss, Mousa, Fair Isle, Westray, Papa Westray, Hoy, Aberdeen.

The cost per person will be £591. The cruises are being run by ERSKINE EXPEDITIONS. Members should write for further information direct to ERSKINE EXPEDITIONS, 14 Lnerleith Place, Edinburgh EH3 5PZ.

Should anyone be interested in going further afield, the *PLANCIUS* will be proceeding on a further cruise from 3rd to 14th June from Aberdeen to Reykjavik via the Shetlands and the Faroes. (Information available from ERSKINE EXPEDITIONS).

#### LOCAL RECORDERS 1985/86

The list below is a new and up to date (7 October 1985) list of SOC Local Recorders. The areas covered by the local recorders have this year been changed from the old County to the new Region and District basis. In the large majority of cases this involves only a small change in the relevant areas. It will greatly help the local recorders and editor and compilers of the *Scottish Bird Report* if this new system of recording areas, using Regions and Districts as set out below, is used from this year (1985) onwards.

**Shetland (except Fair Isle)** D. Coutts, 'Da Knowe', Twageos Road, Lerwick, Shetland.

**Shetland (Fair Isle)** N. J. Riddiford, Bird Observatory, Fair Isle, Shetland.

**Orkney** C. J. Booth, 'Ronas', 34 High Street, Kirkwall, Orkney.

**Western Isles** W. A. J. Cunningham, 'Aros', 10 Barony Square, Stornoway, Isle of Lewis, PA87 2TQ.

**Highland (Caithness)** S. Manson, 7 Duncan Street, Thurso, Caithness.

**Highland (Sutherland)** A. R. Mainwood, 13 Ben Bhraggie Drive, Golspie, Sutherland.

**Highland (Badenoch & Strathspey, Inverness, Lochaber, Ross & Cromarty, Skye & Lochalsh)** R. H. Dennis, Landberg, North Kessock, Inverness IV1 1XD.

**Grampian/Highland (Moray/Nairn)** M. J. H. Cook, Rowanbrae, Clochan, Buckie, Banffshire

**Grampian (Banff & Buchan, City of Aberdeen, Gordon, Kincardine & Deeside)** Dr M. V. Bell, 20 West Mount Street, Aberdeen AB2 4RJ.

**Tayside (Angus, City of Dundee)** N. K. Atkinson, 5 Tolmount Crescent, Montrose, Angus.

**Tayside (Perth & Kinross)** E. D. Cameron, Strathclyde, 14 Union Road, Scone, Perthshire PH2 6RZ.

**Fife (Dunfermline, Kirkcaldy, North East Fife)** D. E. Dickson, 133 Duddingston Drive, Kirkcaldy, Fife.

**Fife (Dunfermline, Kirkcaldy, North East Fife)** D. E. Dickson, 133 Duddingston Drive, Kirkcaldy, Fife.

**Central (Clackmannan, Falkirk, Stirling)** Dr C. J. Henty, 7 Coneyhill Road, Bridge of Allan, Stirlingshire.

**Lothian (Midlothian, City of Edinburgh, West Lothian, inc Forth Is)** I. Andrews, 15 The Parsonage, Musselburgh, Midlothian EH21 7SW.

**Lothian (East Lothian)** A. Brown, 23 King's Court, Glassel Park, Longniddry, East Lothian.

**Borders (Berwickshire, Ettrick & Lauderdale, Roxburgh, Tweeddale)** R. D. Murray, 143 Eskhill, Penicuik, Midlothian.

- Strathclyde (Argyll & Bute (except Bute))** D. Stroud, Kindrochid, Sanaig, Bruichladdich, Islay, Argyll PA44 7RP.
- Strathclyde (Arran, Bute, Cumbraes)** I. Hopkins, 2 Eden Place, High Street, Rothesay, Bute.
- Strathclyde (Inverclyde, Renfrew, Dumbarton, Clydebank, Bearsden & Milngavie, Strathkelvin, City of Glasgow, Eastwood, East Kilbride, Cumbernauld & Kilsyth, Lanark, Hamilton, Monklands, Motherwell)** I. P. Gibson Arcadia, The Glen, Howwood, Renfrewshire.
- Dumfries & Galloway (Stewartry, Wigtown)** A. D. Watson, Barone, 54 Main Street, Dalry, Castle Douglas, Kirkcudbrightshire DG9 3UW.
- Dumfries & Galloway (Nithsdale, Annandale & Eskdale)** Dr E. Fellowes, West Isle, Islesteps, Dumfries DG2 8ES.

### WINTER FIELD TRIPS

- DUNDEE BRANCH** All trips leave Crichton Street, Dundee, at 10 a.m.
- Sunday, 15 December 1985** DUNDEE Stannergate to Monifieth.
- Sunday, 12 January 1986** TENTSUIR TAYPORT AREA.
- Sunday, 9 February 1986** TULLYBACCART AND REDMYRE (Sidlaws between Dundee and Couper Angus).
- Sunday, 9 March 1896** DUNNING AREA.
- Sunday, 20 April 1986** FOWLSHEUGH near Dunnottar Castle.

### BRANCH NEWS

**Aberdeen Branch Sutherland Visit** On the May holiday, May 3-6, the Aberdeen Branch had a weekend trip to Lochinver, organised by our secretary Donald Bain, and a former Aberdeen member, Doug Mainland, who now stays in Lochinver. Doug made sure that we were all in excellent accommodation. We drove up to Lochinver on the Friday and next morning took the boat from Tarbert, near Scourie, across to the RSPB island reserve Handa. Handa is great for a day's birding. The sheer cliffs at the west of the island had Kittiwake, Fulmar, Guillemot and Razorbill and the dramatic Great Stack had Puffins on its top. Bonxies were present in groups but had not yet taken up territory and we had one pair of Arctic Skuas just before we left. Other birds included Red-throated Diver and Tysties on the sea and a Snipe's nest with 4 eggs. Unfortunately, none of us saw the Great Northern Diver which had been hanging about recently.

The Sunday and Monday morning were spent birding in the area. Here again Doug was invaluable in advising where to walk and drive and generally bird spot in the area. In all the group had 97 species for the weekend, including Black-throated Diver, Peregrine, Eagle and Twite. Many thanks to Doug and Angela Mainland for their hospitality and to David for organising a trip which we will undoubtedly repeat.

One other piece of news from Aberdeen is that our just retired chairman, that "well kent" figure, Logan Steele, has become engaged and will be married in October. So Logan has finished lekking and he and Christine will be taking up territory in Hull. Our best wishes go with them both.

A.D.

## ADVICE TO CONTRIBUTORS

**SCOTTISH BIRDS** publishes original material relating to ornithology in Scotland; papers concerned with status and distribution are particularly invited. All papers are considered by an Editorial Panel and, where appropriate, are scrutinised by specialist referees. Authors are advised to invite comment from friends or colleagues, and if necessary to make amendments, before submitting their papers. Short notes on unusual observations or records are also accepted. Contributions are accepted subject to editing and on the understanding that they are not being offered elsewhere. Those accepted will normally be published in order of receipt of the finally revised typescript. Two numbers are published per year, in early June and December. The winter number contains the *Scottish Bird Report*, which includes rarity descriptions (these should be sent to the SBR Editor).

Authors should bear in mind that only a small proportion of the readership is science-trained, and should aim to present their material concisely, interestingly and clearly. Unfamiliar technical terms and symbols should be avoided wherever possible and if deemed essential should be explained. Supporting statistics should be kept to a minimum. Reference should be made to recent issues of *Scottish Birds* for guidance on style of presentation, use of capitals, form of references, etc. Papers should be typed on one side of the paper only, double-spaced and with wide margins; two copies are required and the author should also retain one. Headings should NOT be underlined.

The new format for *Scottish Birds* is the same size as the old-style *Bird Study*, with the text set in double columns. Tables, maps and diagrams should be designed to fit either a single column or the full page width. Tables should be self-explanatory and headings should be kept as simple as possible, with footnotes used to provide extra details where necessary. Each table should be on a separate sheet. Maps and diagrams should be in Indian ink and drawn so as to permit reduction to half their original size; they should be submitted WITHOUT LETTERING and accompanied by a copy showing the lettering required. Captions should be typed on a separate sheet. Relevant line-drawings (in ink) will be welcomed, as will photographs (preferably black & white glossy prints).

**SCOTTISH BIRD NEWS** is the same dimensions as, and similar in general layout to, *BTO News*. The aim is to present material which is as up-to-date as possible and this inevitably imposes constraints during production. Since the material will have to be adjusted to fit into tight space limits, editing may have to be extensive, while time limits mean that it will not be practicable to circulate proofs to contributors, as is the practice with *Scottish Birds*. Publication is quarterly, in early March, June, September and December. Contributions—other than 'Late News' items (see below)—require to be in the Editor's hands not later than 8 weeks prior to publication date (eg by the end of December for the March issue). Longer articles (up to c1,000 words) should be typed (as for SB) but short items will be accepted hand-written (so long as they are easily legible!). The absolute deadline for brief 'Late News' reports, requests for help and notices is 4 weeks before publication is due: such items may be notified to the Editors by telephone if necessary (0738 - 23508)—but it is not possible to guarantee the inclusion of material which arrives at a late stage of production.

Material suitable for SBN includes the following: Branch news, accounts of Ringing Group activities, short reports on conferences, expeditions and on-going fieldwork, comment on unusual bird movements or

mortality, and letters. Illustrations include photographs and vignettes (there is an urgent need for more offers of both) and cartoons, as well as relevant maps and diagrams. All drawn material should be of a size that will allow reduction by about half. It need not be submitted in a 'finished' form, but should carry all the information needed for re-drawing (eg scale, north point, names, units of measurements, etc.).

## Recent Reports

*These notes include unchecked reports and are not intended as a permanent record, nor will they be indexed. Please send reports to Pete Ellis, Houss, East Burra, Shetland, via recorders at the end of March, June, September and December. The period July to September is covered here.*

The exceptionally wet summer affected breeding birds in all areas except the northern isles. **Black-throated Divers** and **Peregrines** had a poor season, but **Ospreys** reared over 50 young for the first time since recolonisation began. Seabirds were badly affected by food shortages. **Gulliemots** died in large numbers in the Firth of Lorn and **Arctic Terns** and **Kittiwakes** had a disastrous breeding season in the northern isles. Migration was rather poor with only 2 sizeable falls on the east coast and in the northern isles in late August and late September. Many of the commoner migrants only occurred in low numbers, however several astounding rarities were seen including 2 new records for the Western Palearctic and a new record for Scotland.

A **White-billed Diver** in Shetland and a **Pied-billed Grebe** in the Western Isles both summered. Seawatching in August and September produced **Cory's Shearwaters** off Gullane and Troon and 2 off Turnberry. **Great Shearwaters** were off Lewis and Caithness, but the only report of sizeable numbers of **Sooty Shearwaters** was 200 per hour off North Ronaldsay. Thirty-five **Leach's Petrels** passed Corsewall Point on 14th September and singles were caught on Noss and on a ship off Stromness. Inland **Manx Shearwaters** were in Speyside and 6 were on Loch Ness. Single **Little Shearwaters** rewarded seawatchers at Turnberry and Corsewall. A **Bittern** was at New Cumnock and the Carron Valley **Bean Geese** numbered 58 by mid-September. **Pink-footed Geese** reached early peaks of 16000 at Strathbeg and 6500 at Aberlady on 30th September. Single **Snow Geese** were on North Ronaldsay and at Meikle Loch, a **Bar-headed Goose** was at Aberlady in September and a **Barnacle Goose** on Fetlar in July, though 175 at Strathbeg in late September were more usual. Five pale-bellied **Brent Geese** were at Virkie in September and a dark-bellied bird was at Aberlady in July. A rash of **Ruddy Shelduck** in July and September brought 2 to Easter Ross, 1 to Aberdeenshire and 2 to East Lothian. The **Black Duck** summered in East Lothian, a **Red-crested Pochard** visited Strathbeg, the **Ring-necked Duck** summered in Shetland and a pair of **Ruddy Ducks** summered in Aberdeenshire. **Honey Buzzards** visited Tynninghame and Fair Isle, an **Osprey** was in Shetland, a **Hobby** in Aberdeenshire and **Saker** on North Ronaldsay. Fair Isle had a **Quail**, a **Corncrake**, and two **Spotted Crakes**, with another on North Ronaldsay. A **Crane** was seen at Caerlaverock. It was a good autumn for rare waders. A **Dotterel** was at Bogside and a **Lesser Golden Plover** on Fair Isle. **Little Stints** peaked at 23 at Aberlady but only 8 at Virkie. Aberlady had a **Temminck's Stint**. Two **White-rumped Sandpipers** were in Aberdeenshire and another in Caithness whilst a **Sharp-tailed Sandpiper** put in a brief appearance at Aberlady. **Curlew Sandpipers** reached maxima of 25 at Virkie, 9 on Fair Isle, 5 at Inverness, 7 on the Don, 7 on the Ythan and 23 at Aberlady. Single **Buff-breasted Sandpipers** were in Shetland and at Linwood. **Great Snipe** were on Fair Isle and more un-

usually in Caithness. A **Long-billed Dowitcher** was at Caerlaverock. **Spotted Redshanks** appeared in small numbers in the northern isles, but **Green Sandpipers** were seen in exceptional numbers in several areas. **Wood Sandpipers** also appeared in better than average numbers. **Wilson's Phalaropes** were seen at Inverness and Aberlady and 3 **Grey Phalaropes** were in Shetland and 2 off North Ronaldsay. Fair Isle had a **Pomarine Skua**, with 2 off North Ronaldsay and 2 at Inverness. **Long-tailed Skuas** were off Fair Isle, with 2 at Birsay and 1 off Barns Ness. A single **Mediterranean Gull** visited Musselburgh and a **Little Gull** was in Shetland with 5 at Strathbeg and 350 at Carnoustie. **Sabine's Gulls** were on Benbecula and South Uist with 2 off Corsewall Point. Single **Gull-billed Terns** were off Burnmouth in July and Barns Ness in August, but **Black Tern** numbers in East Lothian were poor. Early **Little Auks** were off Harris and Hoy in September. The Orkney **Scops Owl** died in July. A **Nightjar** was in Edinburgh in July when a **Bee-eater** visited several sites in Orkney. A **Hoopoe** was in Yell and **Wrynecks** were in the northern isles, with a peak of 10 on Fair Isle on 20th August. A **Great Spotted Woodpecker** was in Shetland, with another on Fair Isle.

Out Skerries had a **Richard's Pipit**, whilst Fair Isle had 3 and North Ronaldsay another. An unprecedented 3 **Pechora Pipits** were on Fair Isle, the first there since 1978. Fair Isle also had a **Citrine Wagtail** when another was in East Lothian, the third there in recent years. **Thrush Nightingales** were on Bressay and Noss in August. The only **Black Redstart** reported was on Copinsay, but **Siberian Stonechats** were at Quendale and on Fair Isle. Fair Isle also had a **Lanceolated Warbler** and a **Grasshopper Warbler** with another seen on Whalsay. Two **Aquatic Warblers** were on Fair Isle in August when a **Blyth's Reed Warbler** was caught on Noss. The only **Marsh Warbler** was on Fair Isle, but the late August fall brought good numbers of **Reed Warblers** to the northern isles. Four **Icterine Warblers** were in Shetland with 7 more on Fair Isle and another on North Ronaldsay. Fair Isle had 2 **Arctic Warblers**, the only others being on South Ronaldsay and in Caithness. A fall of **Yellow-browed Warblers** on 23rd September brought only 3 to Shetland but 25 to Orkney, 23 to Caithness and 9 to Aberdeenshire. **Red-breasted Flycatchers** were involved in the same fall with 1 on North Ronaldsay, 5 at Fife Ness and 6 at Barns Ness. A pair of **Golden Orioles** were seen during the summer in Aberdeenshire. New for the Western Palearctic was a **Brown Shrike** at Grutness in Shetland. The late August fall involved good numbers of **Red-backed Shrikes**, with 3 on Fetlar, 3 on Whalsay, 3 at Virkie, up to 8 on Fair Isle and 3 on North Ronaldsay. A **Tree Sparrow** in Shetland was unusual. An influx of **Siskins** occurred from late June. **Common Crossbills** also irrupted with peaks of 92 in Lerwick and 60 at Kergord. **Scarlet Rosefinches** were mainly in the northern isles as usual. A **Bullfinch** in Shetland on 10th August was a very unusual date. New for Scotland was a **Blackpoll Warbler** on Whalsay, but this was out-done by Fetlar which produced a **Chestnut-sided Warbler**, the first record of this American warbler in the Western Palearctic. **Lapland Buntings** peaked at 8 on Fair Isle, with several on North Ronaldsay and 5 on Papa Westray. Single **Ortolan Buntings** reached Yell and Fair Isle in August and Fair Isle again in September, where there was also a **Rustic Bunting**. Fair Isle also had 3 **Little Buntings** with others on Out Skerries, North Ronaldsay and the Orkney Mainland. Fair Isle had at least 3 **Yellow-breasted Buntings** whilst another was on North Ronaldsay. Also on Fair Isle were both **Black-headed** and **Red-headed Buntings**.

**Stop Press** Forster's Tern at Musselburgh, new for Scotland, and **White's Thrush** in Shetland.

PETE ELLIS

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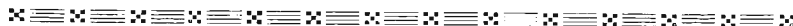
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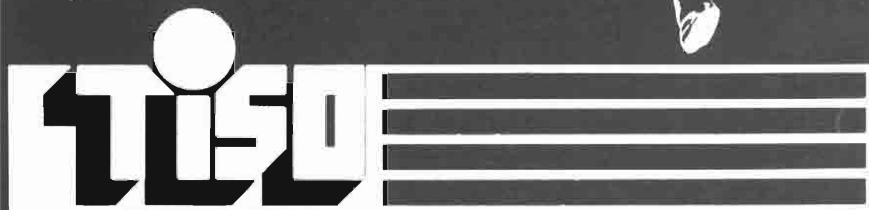
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