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# SCOTTISH BIRDS



THE JOURNAL OF THE  
SCOTTISH ORNITHOLOGISTS' CLUB

Vol 13 No. 7

Autumn 1985



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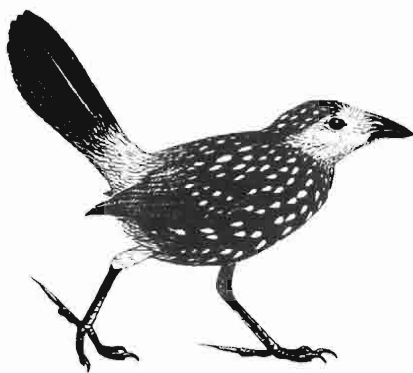
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# SCOTTISH BIRDS

THE JOURNAL OF THE SCOTTISH ORNITHOLOGISTS' CLUB



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Volume 13 No. 7

Autumn 1985

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

## The breeding birds of agricultural land in south-east Scotland

S. R. D. da PRATO

*Most assessments of farmland bird populations are based on rather small study areas, and most of the published data relate to England, where farming conditions are very different from those in Scotland. The study reported here is of particular value on account of the large area covered and the fact that it was carried out in one of the most intensively farmed arable districts. What is needed now is a comparable study from the more pastoral west, where hedges remain a significant feature of the landscape.*

Farmland covers by far the largest proportion of lowland Britain. Despite increasing concern over the effects of hedgerow removal and field drainage, data on the wildlife actually existing on farmland are remarkably sparse for many parts of Britain. Most work on farmland bird populations has been carried out in southern England (eg Moore *et al* 1967, Williamson 1967, Wyllie 1976) though recently the wader populations of various types of agricultural land in Scotland have been surveyed (Galbraith *et al* 1984) and a study aimed at quantifying the effects of changes in land use on birds in lowland Scotland has been commissioned by the Nature Conservancy Council (Dr P. Shaw pers. comm.).

Since most British passerines are of woodland origin, hedges and shelterbelts are often regarded as refuges for species which could not survive on farmland without them (Pollard *et al* 1974). However bird numbers on farms do not simply reflect the length of hedgerow; for example the removal of a third of the internal hedges from a farm in Norfolk resulted in no significant reduction in overall bird numbers, though species composition did change, suggesting that some hedgerows may be of little value to many species (Bull *et al* 1976).

Studies of Great Tits (Krebs 1971) and Wrens (Williamson 1969) indicate that hedges are colonised by these species only when territories are not available in nearby woods. Furthermore, past and present regional differences in agricultural practice in Britain mean that farmland does not necessarily provide the same habitat for birds throughout the country. In Scotland the enclosure movement came much later than further south, being largely the work of "improving" landowners in the 18th and early 19th centuries, with the result that fields tend to be larger and hedges less varied in composition than in southern England, where many hedges are of greater antiquity, sometimes dating back to the original native woodland (Millman 1975, Pollard *et al* 1974).

Earlier work in Midlothian had cast doubt on the value of most hedges in the area, at least to insectivorous species (da Prato & da Prato 1977 and in prep.); between 1979-82 census work on 1622ha (4008 acres) in East and Midlothian confirmed that warblers were scarce or absent in hedgerows, though relatively common in other habitats including woodland and, rather more surprisingly, former railway lines and colliery tips. In 1982 other songbirds were also censused in parts of the study area. Although this work confirmed that warblers were useful indicator species of habitat quality for songbirds, it also emphasised that a census of all bird species over a large area would be much more time consuming than a census limited to warblers which sing vigorously after arrival in spring and readily respond to tape recordings of their song (da Prato unpubl.). However a large scale census is particularly valuable since the problems of territories which overlap site boundaries are minimized and the densities obtained are much more likely to reflect the true status of a species than those extrapolated from small plots (Marchant 1981).

In 1984 I carried out a survey of 1735ha (4287 acres) of predominantly agricultural land in East and Midlothian. This paper reports the results and discusses the relative conservation value of the different habitats found within the study area, one of the largest ever surveyed by a mapping method.

### The study area

The study area lies on the boundary of East and Midlothian at an altitude of 50 to 160m above sea level (Fig. 1). Most (91%) of its 1735ha is farmland of which 1414ha was arable land in 1984, principally devoted to cereal production, with smaller areas of temporary (29ha) and permanent (83ha) grass. The study area contains three small woods totalling 27ha and made up of a variety of native and exotic tree species, four shelterbelts and a variety of hedges and tree lines totalling 61.9km. At least 18.3km of field boundary, probably mostly of hedge, shown



on older (pre-1945) OS maps have been removed. As a result many of the arable fields are large (up to ca 30ha). The area also contains several abandoned collieries with associated bings (spoil heaps) and sidings and 9km of disused railway line, closed for at least 20 years, which served the collieries as well as carrying passenger traffic. Some 22.5km of class B and minor roads run through the area as well as 13.2km of farm track and footpath. One village and 16 farm steadings lie within the study area but were excluded from the census.

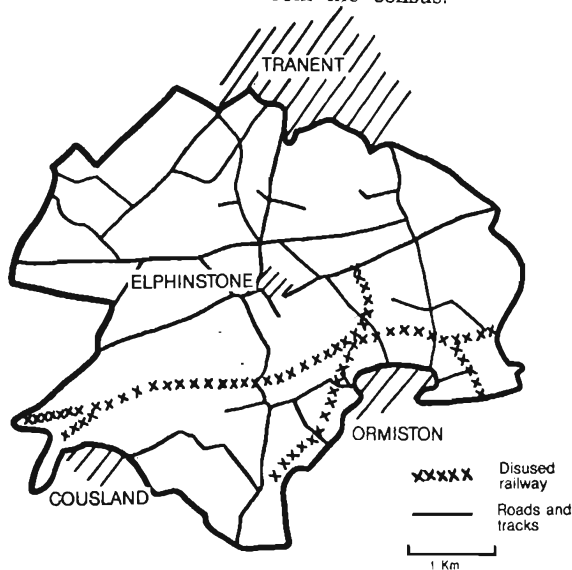


Fig 1. The study area

## Methods

Birds were censused by a mapping method (see review and further references in Oelke, 1980) similar to that used by the British Trust for Ornithology (BTO) for its Common Bird Census (CBC) monitoring scheme (Marchant 1983). Territory mapping has been shown to be more efficient than other census methods in Scottish woodland (Moss 1976).

Most census visits started at dawn, though all areas were also visited in the evenings to check for crepuscular species such as Woodcock and owls. The size of the census area meant that it had to be sub-divided; morning visits were made to each sub-division at ca.10-day intervals. Starting points were changed between visits to ensure that every part of the study area was censused at least once immediately after dawn when song is at a peak. Censusing continued until late morning provided weather conditions (wind Beaufort Scale 4 or less and precipitation absent or, at most, light drizzle) did not deteriorate. Weather conditions were unusually favourable in 1984 and were a major factor in allowing a single observer to cover such a large area. Most areas were censused at least ten times but some between-field hedges known from previous experience to hold few birds were censused only six times. As a check, several such hedges were walked ten or more times in 1984. The extra visits did not establish more territories probably because so few birds

were present (Table 3) and the hedges were so narrow that birds were easily disturbed and therefore recorded even when not singing. A bicycle was used when censusing some road and trackside hedges though these hedges were also walked. The census period was from late March to early July. Early season (late March-mid April) visits proved useful with sedentary species eg. Dunnock, whose song output was reduced later in the season. Visits after mid-June proved of limited value except for some late migrants eg. Spotted Flycatcher.

All species which showed evidence of breeding in the area were censused except for feral pigeons and House Sparrows. Woodpigeons could not be censused accurately but an estimate was made of breeding numbers from flocks seen in spring; it is not known how such an estimate compares to the true population. Except on pasture, and arable fields early in spring, which could be walked through, field species were censused by scanning from field edges.

Habitat features, including field crops and the presence of scrub or marsh, were noted on visit maps in the field. Hedges were classified by height (greater or less than 2m) and the presence of trees was noted. When trees made up over 50% of a hedgerow's length it was classed as treeline; the presence or absence of shrub understorey was also recorded. Tree lines with two or more rows of trees were classed as shelterbelts. Ditches were recorded only if capable of holding water for at least part of the season, since many ditches were no longer maintained and gradually infilling. The widths of representative stretches of hedge and tree-line were measured at ground level.

Areas were calculated from Ordnance Survey maps with a planimeter, to allow bird densities/km<sup>2</sup> to be determined for the three major habitats covered ie. farmland, woodland and former industrial land, as well as a small (10.4ha) area of scrub and young woodland known to contain a particularly high density of breeding birds and under consideration as a Site of Special Scientific Interest and nature reserve. Bird densities are expressed as territories/km<sup>2</sup> to facilitate comparisons with other studies. However it should be borne in mind that densities derived from small areas of favourable habitat can be misleadingly high, for example when birds that hold territory and nest in a wood use areas outside the wood for feeding. This problem is particularly acute with shelterbelts and hedgerows since many birds that nest and sing in hedges feed elsewhere (Davis 1967 and pers. obs.).

Species maps were prepared which allocated each territory to a specific habitat. Territories overlapping habitat types were allocated to the habitat in which the majority of registrations occurred; when equal numbers of registrations occurred in two habitats the territory was allocated to the habitat with a majority of song registrations.

## Results

The study area held 2980 territories of 61 species at an overall density of 172/km<sup>2</sup> (Table 1). This figure does not include House Sparrows or feral pigeons, which both bred in the area, or Rooks, Swifts and hirundines (except for a few Swallows) which fed in or over the census area but nested elsewhere. Birds were not evenly distributed throughout the study area. Densities reached over 2000/km<sup>2</sup> in the potential nature reserve, which gives an indication of how many birds a small area can support if the habitat is suitable. Densities

**Table 1** The numbers of territories censused in 1735ha of predominantly agricultural land in Lothian, S.E. Scotland, in 1984

The numbers of territories are shown and, in brackets, the equivalent density per square kilometre. Densities under one territory/km<sup>2</sup> are divided into those under 0.5/km<sup>2</sup> (<0.5) and those above 0.5km<sup>2</sup> but less than one territory/km<sup>2</sup> (<1).

	Farmland 1586.6ha	(1) Woods 26.9ha	Derelict land 111.4ha (2)	Scrub (3) Nature Reserve 10.4ha	Overall
Mallard	8(<1)	4(15)	5(4)	1(10)	18(1)
Sparrowhawk	1(<0.5)	2(7)	0	0	3(<0.5)
Kestrel	3(<0.5)	1(4)	1(<1)	0	5(<0.5)
Red-legged Partridge (4)	1(<0.5)	0	1(<1)	0	2(<0.5)
Grey Partridge	75(5)	1(4)	25(22)	4(38)	105(6)
Pheasant	6(<0.5)	6(22)	5(4)	4(38)	21(1)
Moorhen	1(<0.5)	0	1(<1)	0	2(<0.5)
Oystercatcher	7(<0.5)	0	0	0	7(<0.5)
Ringed Plover	1(<0.5)	0	0	0	1(<0.5)
Lapwing	21(1)	0	0	0	21(1)
Snipe	3(<0.5)	0	0	0	3(<0.5)
Woodcock	0	2(7)	0	0	2(<0.5)
Curlew	2(<0.5)	0	0	0	2(<0.5)
Redshank	1(<0.5)	0	0	0	1(<0.5)
Stock Dove	16(1)	5(19)	6(5)	1(10)	28(2)
Woodpigeon (5)		200 estimate		22(212)	222(13)
Collared Dove	1(<0.5)	2(7)	11(10)	2(19)	16(<1)
Cuckoo	1(<0.5)	0	0	0	1(<0.5)
Tawny Owl	2(<0.5)	3(11)	0	1(10)	6(<0.5)
Great Spotted Woodpecker	0	1(4)	0	0	1(<0.5)
Skylark	188(12)	0	3(3)	0	191(11)
Swallow	2(<0.5)	0	12(11)	0	14(<1)
Meadow Pipit	3(<0.5)	0	3(3)	0	6(<0.5)
Grey Wagtail	0	0	1(<1)	0	1(<0.5)
Pied Wagtail	0	0	8(7)	0	8(<0.5)
Wren	20(1)	28(104)	18(16)	4(38)	70(4)
Duncock	174(11)	27(100)	73(66)	21(202)	295(17)
Robin	43(3)	30(112)	38(34)	11(106)	122(7)
Whinchat	0	0	2(2)	0	2(<0.5)
Blackbird	133(8)	34(126)	66(59)	21(202)	254(15)
Song Thrush	81(5)	23(86)	27(24)	15(144)	146(8)
Mistle Thrush	3(<0.5)	2(7)	3(3)	0	8(<0.5)
Grasshopper Warbler	4(<0.5)	0	2(2)	0	6(<0.5)
Sedge Warbler	16(1)	2(7)	43(39)	8(77)	69(4)
Lesser Whitethroat	4(<0.5)	4(15)	9(8)	3(29)	20(1)
Whitethroat	47(3)	2(7)	34(31)	6(58)	89(5)
Garden Warbler	0	4(15)	8(7)	2(19)	14(<1)
Blackcap	2(<0.5)	7(26)	2(2)	3(29)	14(<1)
Chiffchaff	0	2(7)	0	1(10)	3(<0.5)

	Farmland (1) 1586ha	Woods 26.9ha	Derelict land 111.4ha (2)	Scrub (3) Nature Reserve 10.4ha	Overall
Willow	53(3)	37(138)	76(68)	17(163)	183(11)
Warbler					
Goldcrest	3(<0.5)	21(78)	0	0	24(1)
Spotted	5(<0.5)	6(22)	2(2)	3(29)	16(<1)
Flycatcher					
Long-tailed Tit	0	1(4)	0	0	1(<0.5)
Coal Tit	5(<0.5)	9(33)	0	0	14(<1)
Blue Tit	41(3)	28(104)	20(18)	4(38)	93(5)
Great Tit	21(1)	15(56)	11(10)	2(19)	49(3)
Treecreeper	0	2(7)	0	0	2(<0.5)
Magpie	0	0	1(1)	0	1(<0.5)
Jackdaw	12(<1)	3(11)	4(4)	3(29)	22(1)
Crow	19(1)	5(19)	7(6)	2(19)	33(2)
Starling	51(3)	9(33)	22(20)	2(19)	84(5)
Tree Sparrow	29(2)	2(7)	12(11)	4(38)	47(3)
Chaffinch	36(2)	40(149)	53(48)	19(183)	148(9)
Greenfinch	14(<1)	12(45)	21(19)	6(58)	53(3)
Goldfinch	2(<0.5)	6(22)	9(8)	2(19)	19(1)
Linnet	41(3)	6(22)	39(35)	15(144)	101(6)
Redpoll	15(<1)	13(48)	32(29)	9(87)	69(4)
Bullfinch	3(<0.5)	9(33)	6(5)	3(29)	21(1)
Yellowhammer	86(5)	14(52)	56(50)	12(115)	168(10)
Reed Bunting	8(<1)	2(7)	15(13)	1(10)	26(1)
Corn Bunting	7(<0.5)	0	0	0	7(<0.5)
Total territories	1321	432	793	234	2980(6)
Total density	(83)	(1606)	(712)	(2250)	(172)
Total species	51	43	44	34	61

**Notes** (1) farmland included fields, hedgerows and shelterbelts but excluded farm gardens and yards.

(2) disused railways, sidings and coal bings.

(3) an area of regenerating scrub, some mature trees, and a particularly high population of songbirds, under discussion as an S.S.S.I. and S.W.T. nature reserve.

(4) Red-legged Partridge may have included Chukar hybrids.

(5) based on the flocks seen at the start of the season.

(6) the grand total is higher than the sum of the four habitat totals due to the inclusion of the estimate of 200 Woodpigeon territories.

were also high (1606/km<sup>2</sup>) in the three small woods, all of which provided a varied habitat with both mature and young trees and shrubs, creepers and herbs. Former industrial land had an overall density of 712 territories/km<sup>2</sup>. However this category included areas not yet colonized by plants, especially the former railway tracks, the steeper bings and areas recently bulldozed. The lowest density by far was found on farmland with 83 territories/km<sup>2</sup> which is over 25 times less than in the rich scrub area; some individual farms without shelterbelts,

tall hedges or areas of scrub would have even lower densities. More species were recorded on farmland but that is almost certainly an artefact, since farmland occupied over 90% of the study area.

Only Skylark (12) and Dunnock (11) exceeded ten territories/km<sup>2</sup> on farmland with Blackbird the third most common species (8), followed by Grey Partridge, Song Thrush and Yellowhammer (5 each). Woodpigeons should possibly be included here, though Starlings and House Sparrows, which are also difficult to census, probably should not. The other 44 species were at densities below five territories/km<sup>2</sup>; 30 of them did not reach one territory/km<sup>2</sup>. By contrast the woodland and scrub held several passerine species at over 100 territories/km<sup>2</sup> while even the "derelict" land held 21 species at densities of 10 or more/km<sup>2</sup>, 19 more than on farmland.

**Table 2** The number of territories in different field types.  
(Densities/km<sup>2</sup> are shown in parentheses)

	Arable 1413.8ha	Short term grass 28.5ha	Permanent pasture 82.6ha	Total fields 1524.9ha
Mallard	0	0	3(4)	3(<0.5)
Partridges	663(5)	0	10(12)	763(5)
Oystercatcher	1(<0.5)	2(7)	4(5)	7(<0.5)
Ringed Plover	1(<0.5)	0	0	1(<0.5)
Lapwing	13(<1)	2(7)	6(7)	21(1)
Snipe	0	0	3(4)	3(<0.5)
Curlew	2(<0.5)	0	0	2(<0.5)
Redshank	0	0	1(1)	1(<0.5)
Stock Dove	0	0	1(1)	1(<0.5)
Woodpigeon	0	0	2(2)	2(<0.5)
Skylark	176(12)	4(14)	8(10)	188(12)
Meadow Pipit	0	2(7)	1(1)	3(<0.5)
Corn Bunting	7(<0.5)	0	0	7(<0.5)
Other songbirds	0	0	694(84)	694(5)
Total territories	266(19)	10(35)	108(131)	384(25)
Total species	8	4	27	31

- Notes**
- 1 Birds from surrounding hedges are not included in this table.
  - 2 Permanent pasture invariably included areas of scrub, and/or marsh and damp ground.
  - 3 Includes one Red-legged Partridge.
  - 4 Made up of 17 species which all nested in scrub or marsh vegetation.

Although the overall bird density was low on farmland there was considerable variation in the number and variety of birds found in different habitats within the farms. Table 2 shows details of birds recorded in fields, excluding birds which nested in surrounding hedges. The few grass fields held a

greater variety (27 species) of birds than arable land (8 species) although the latter covered a much greater area. Skylarks and Partridges were common on both arable and grassland; most other field species were much more likely to occur on grass. Furthermore, many of the waders that nested in arable fields chose fields adjacent to damp grassland. The only species found on arable land but not on grass were a few Corn Buntings, two Curlews and single Red-legged Partridge and Ringed Plover territories. Permanent grassland also held a variety of songbirds, since two fields contained areas of scrub, while a third held a small marsh which attracted species like Grasshopper Warbler and Reed Bunting as well as the only Snipe found in the study area. Perhaps it should be stressed that in the study area permanent grass always occurred in conjunction with damp ground and/or scrub. Fields sown with grass for short term leys did not have these features, and were markedly poorer in bird species, though they did hold birds at nearly twice the density of arable land.

Table 3 compares the value of different types of field boundary to songbirds other than Skylarks and Corn Buntings. Numbers varied from under three territories/km in low hedges between fields to around 30 territories/km in field treelines with an understorey. More birds were found in hedges and treelines along roads and tracks than in comparable features separating fields, probably since the former were usually wider. Several road or trackside hedges and treelines held songbirds at 30-40 territories/km; their widths ranged from four to 18m. Shelterbelts, which were wider still, averaged 79 songbird territories/km which would be equivalent to a density of nearly 2000/km<sup>2</sup>, although it is again stressed that densities derived from such narrow features can be misleadingly high. The presence of a ditch (few of which held permanent water) alongside a hedge seemed to serve chiefly to increase the amount of herbaceous vegetation; this in turn tended to increase the numbers of songbirds, rather than the number of species, though there was considerable variation due to the management of the ditches and adjacent hedges. The few ditches that did hold water for long periods also held a few Mallard and a single Moorhen territory.

Although shelterbelts and the larger types of hedge held a variety of songbirds these features were relatively uncommon as field boundaries. The majority (61%) of hedges were mechanically cut to well under 2m high each year, held an impoverished ground flora, except on some roadside verges, and supported a limited range of songbirds at five territories or less/km of hedge.

Table 3 Songbird numbers in hedgerows and shelterbelts

Between fields	Total length (kms)	Range of widths in mtrs.	Number of territories	Number of species	Territories per km.
1 Low hedge	19.41	1.2-3.0	54	6	2.78
2 Low hedge and ditch	1.42	4.9-5.5	7	5	4.93
3 Low hedge and scattered trees	4.10	2.5-5	49	11	11.95
4 Treeline without understorey	1.42	3-5	13	7	9.15
5 Treeline with understorey	1.42	4-8.6	41	14	28.87
6 Treeline with understorey and ditch	2.75	9.1-18.2	90	14	32.73
<b>Along tracks and roads</b>					
1 Low hedge	17.08	2-9.4	86	8	5.03
2 Low hedge and ditch	2.20	9-15.8	39	10	17.73
3 Low hedge and scattered trees	2.43	2.7-8.0	32	10	13.17
4 Tall hedge	1.46	4-15.0	58	12	39.73
5 Tall hedge and scattered trees	2.69	4-17.3	88	16	32.71
6 Treeline with understorey	3.58	5-17.8	141	20	39.38
<b>Shelterbelts</b>	1.97	18-85	156	24	79.19

Notes (1) Combinations not shown in the table eg. tall hedge between fields were either not found in the study area or occurred so infrequently as to give unrepresentative samples.

(2) All species of passerines are included except Skylarks, Corn Buntings, House Sparrows and corvids.

### Discussion

In this study overall bird numbers on farmland were well under the 100-400 pairs/km<sup>2</sup> quoted by Williamson (1967) for a range of farms in England. This could result either from bird numbers being generally lower in Scotland or because the habitats available were poorer in the study area than on the English farms. Some species were certainly scarce or absent. Only seven male Corn Buntings were located in an area that held ten in 1982 confirming the species' decline in one of its few remaining strongholds in the Lothians (Brown *et al* 1984). By contrast Lesser Whitethroats may be increas-

ing (da Prato 1980) though they are still scarce by southern standards. The absence or scarcity of Barn Owl, Jay and Magpie is not typical of the Lothians (Lothian Bird Reports) though not of other Scottish regions (Sharrock 1976). The relatively low numbers of cold sensitive species eg. Wren and Long-tailed Tit in Lothian in 1984 is linked to recent cold winters (pers. obs.), while conditions in Africa adversely affected Whitethroats and Sedge Warblers throughout Britain (BTO provisional CBC data). Quail were absent in 1984 though the species has been recorded in small numbers in parts of the study area in seven of the ten preceding years. Moorhen were surprisingly scarce though the species seems to have suffered a population collapse elsewhere in the Lothians with feral mink a possible, though controversial, cause (Alexander 1983, Brown 1984).

However, the relative scarcity of certain species has to be set against the overall densities found in scrub and woodland, which are as high as found anywhere in Britain (see Williamson 1970, Moss 1978 and Wilson 1978 for comparative figures from a range of wood and scrub habitats) and the numbers found in the better hedges and treelines which are comparable to those quoted by Moore *et al* (1967) for overgrown English hedges, suggesting that it was the poor quality of much of the habitat that was responsible for the low overall bird density found on farmland in this study. This raises the question of how representative CBC plots are, since they are chosen by their volunteer observers who are unlikely to pick uninteresting farms (though see discussion of these problems in Fuller *et al* 1985). One farm in Suffolk, which supported birds at ca700 pairs/km<sup>2</sup> (Benson & Williamson 1972) contained several areas of wood and scrub, while the few farmland CBC plots in Scotland include one with ca10% of its area in deciduous woodland and an East Lothian farm which includes coastal dunes and scrub (Dr P. Shaw pers. comm.).

The large fields and low, clipped hedges which made up most of the 1735ha study area seem to offer suitable conditions to a very limited range of species. Arnold (1983) found that similar hedges in Cambridgeshire held no breeding tits, warblers, Robins or Wrens while Osborne (1984) found relationships between hedge size and complexity and bird numbers on a Dorset farm where most hedges corresponded to the more substantial ones found in this study.

In a survey of a 5.37km<sup>2</sup> English parish Wyllie (1976) found densities of 83-123/km<sup>2</sup> on farmland but up to 929/km<sup>2</sup> in a village where many of the birds were concentrated on common land, orchards and mature gardens; newer gardens held few



birds. Villages and farm buildings were not included in this study. They would have added House Martins and extra Dunnocks and Blackbirds but previous experience had shown that they held very few warblers and relatively few finches. Although built-up areas can hold many birds (Simms 1975) many modern housing areas typically hold only a few birds of a limited range of species (da Prato in prep.). In any case bird numbers in villages should not be allowed to influence estimates of farmland populations.

Studies of hedgerow characteristics throughout East Lothian (Tozer & Taylor 1979) indicate that most hedges in the district, and probably in many other arable farming areas, are similar to the low, clipped thorn hedges which seem to be of such limited value to most birds. These findings lend weight to Murton and Westwood's (1974) opinion that "hedgerows appear to be sub-optimal habitats which have become a red herring so far as the real issues affecting the welfare of birds in Britain is concerned". The point is worth stressing since popular books on conservation (eg. Shoard 1980, Pye-Smith & Rose 1984) continue uncritically to attribute a value to "hedgerow" of all types, an attitude which could prove harmful if it diverts attention from more valuable habitats\*. In practice the most useful hedges are most likely to occur along roads, tracks or streams where there is less pressure to remove them. Many roadside hedges would hold more birds if adjacent verges were cut less frequently allowing the ground flora to develop. This would also encourage a variety of wildflowers and save money. A few tall hedges and shelterbelts will support many more songbirds than many small hedges between fields, and would have the added attraction for the farmer of facilitating cultivation and providing Pheasant cover.

The only species which might suffer from further removal of poor quality hedges would be the Grey Partridge, though this species' nest site requirements can be met by unploughed areas without woody plants, provided cover is sufficient (Potts, 1980). Although Skylark was one of the commonest field species in this study, the 12/km<sup>2</sup> density recorded is low compared to the 48-67/km<sup>2</sup> found on the nearby natural grasslands at Aberlady Nature Reserve (P. Gordon, pers. comm.) or the densities of up to 56/km<sup>2</sup> in NW England where Skylarks were found to prefer grassland to arable fields (Robson & Williamson, 1972). A marked difference in wader

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\*Footnote : unfortunately this is happening to two of these fields at the time of writing.

numbers between arable and unimproved pasture has been found throughout Scotland (Galbraith *et al* 1984). The few permanent grass fields which remained in the study area stood out since they were all relatively small remnants of sloping or damp ground unsuitable for cultivation. They are clearly of higher conservation value than most hedges but only provided they do not suffer scrub clearance or drainage (cf Shrubbs 1970)\*.

The relatively high bird density found in the woods compares with ca1400/km<sup>2</sup> in the best western oakwoods (Williamson 1974) and is higher than the ca800/km<sup>2</sup> in broadleaved Scottish woods without understorey (Williamson, 1974). Although spruce and larch had been planted in parts of the three woods censused, the nature of the ground and the relatively small size of each wood meant that there were opportunities for native shrubs, creepers and herbs to develop giving all the woods a complex structure. Moss (1978) recorded a density of 1600/km<sup>2</sup> in mixed woodland compared to 200 to 500/km<sup>2</sup> in even-aged conifer monocultures. These data support the view that structural diversity in woodland is at least as important as species composition.

Perhaps the most interesting finding from this study was the ornithological potential of what is often termed "derelict land". A fuller account of the birds of disused railways and coal bings will be published separately but the following points are appropriate here. Such land, although still below its full potential in many places, already provides better habitat for birds than many farm hedges and is less likely to be converted to arable land or removed than hedges for economic reasons. The scrub that develops on derelict land is particularly important for species such as Whitethroat, Linnet and Yellowhammer, which are scarce in mature woodland, and for which many modern hedges now seem inadequate.

Railways are particularly valuable since they do not require the site work that some bings do for safety reasons, and they have the advantage that they can cater for a variety of recreational needs besides wildlife conservation (Parham 1972). This means that local communities are likely to support their

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\*Footnote: as an example of this a farmer who "had been to a meeting on conservation and land-use organized by the Nature Conservancy Council and Scottish Wildlife Trust" proudly showed me his neatly clipped but almost birdless hedges in preference to an overgrown former colliery which he felt was "too untidy".

retention, whether for activities such as cycling, running or riding, or merely as public walkways which also commemorate the social and economic history of the local area.

### Acknowledgments

I should like to thank the many farmers and landowners for access to their land, Rob Fuller, Hector Galbraith Drs Dorian Moss, Phil Shaw and Iain Taylor for constructive comments on the draft MS and Mrs Susan da Prato for help with calculations and typing.

### Summary

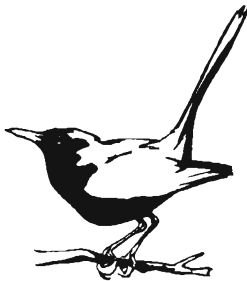
The breeding birds of 1735ha of predominantly agricultural land in Lothian, SE Scotland, were censused in 1984. Densities varied from 2250/km<sup>2</sup> in scrub, 1606/km<sup>2</sup> in mixed woodland, 712/km<sup>2</sup> on disused industrial land to 83/km<sup>2</sup> on farmland. The farmland density was lower than densities derived from CBC plots on English farms. The few permanent pastures held many more birds of more species than arable fields, probably because they contained areas of scrub and damp ground. The most common hedge types held songbirds at five territories/km or less. Only larger-than-average hedges, especially those with trees and a developed ground flora, and sheiterbeits, held many songbirds. Such hedges were usually along roads, tracks or streams rather than between fields. The value of hedges to birds is discussed and it is suggested that in lowland Scotland former industrial land, especially old railway lines, is of potentially greater conservation value than most hedges.

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**Photographic Competition Reminder** All entries for the 1985 competition must reach 21 Regent Terrace by Monday 30 September.

## Isle of May Bird Observatory and Field Station report for 1984

*Prepared for the Observatory Committee  
by B. ZONFRILLO, Hon. Secretary*

The Observatory's Golden Jubilee year opened on 28th March and coverage was generally good until 19th November. Only short periods in early April and early November were without records. New to the island were Mediterranean Gull and Red-rumped Swallow\*, with rarities such as Sabine's Gull, Thrush Nightingale\*, and Little Bunting\* making an appearance. Dr Sarah Wanless, NCC's summer warden and Dr M. P. Harris assisted with the Observatory's records and we are grateful to them and to Peter Kinnear for additional records. 6284 birds were ringed and Arctic Terns bred successfully for the first time since 1956.

### Migration summary

Early signs of migration were evident as the Observatory opened for the season with a "Commic" Tern, Wheatear and 20 Woodcock present on 28th March. A Glaucous Gull was seen on 29th and on 30th a Black Redstart arrived. Offshore on 31st was a Red-necked Grebe and a Merlin and Peregrine hunted on the island.

Further Wheatears and a Grey Wagtail arrived on 1st April and small flocks of Redwings, Fieldfares, Song Thrushes and Blackbirds made their way northwards. The first Swallow arrived on 16th April with, among other birds, a Water Rail and a Whimbrel. On 18th April an influx of 100 Goldcrests, a record spring count, had with them a fine Firecrest and the first Chiffchaff of the year. A Black Redstart and four Willow Warblers on 19th and a Redstart, two Tree Pipits, 20 Robins and a Collared Dove on 21st gave only a hint of spring passage. Migration was slow and sparse and the breeding birds were awaiting a change in the weather, the first Shag eggs appearing on 27th April, about a month later than usual. By 30th a White Wagtail, Black Redstart, Ring Ouzel and Golden Plover were the best of a meagre arrival.

May day saw a Greylag Goose on the island and small numbers of Meadow Pipits on passage. Arrivals on 2nd included

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\*Records subject to acceptance by Rarities Committee.

a Dunnock, Wren, Black Redstart and Ring Ouzel. Six Sandwich Terns were seen at sea and a superb adult Mediterranean Gull called and flew close to the startled observers, providing the first record of this species for the island. A Tufted Duck on 11th May was unusual but other migrants were in short supply with only a Lapland Bunting on 13th as a highlight. A Lesser Whitethroat was trapped on 14th and another arrived the next day, but it wasn't until 18th that an easterly drift brought in a Bluethroat. By 21st May the northeasterlies paid dividends with a fall of continental migrants. A male Bluethroat appeared out of the fog and rain, then a Hawfinch was trapped, only the second ever record for the island. This was followed by a dowdy Scarlet Rosefinch and a few more regular species such as Pied Flycatcher, Black Redstart and Cuckoo. A Grey-headed Wagtail was also seen.

The 22nd brought in more migrants with seven Bluethroats, outnumbering Wheatears. A female Red-backed Shrike, two Black Redstarts, a selection of warblers and other small passerines were occupying diverse habitats on the island. A Marsh Warbler was trapped and a Thrush Nightingale\* dodged in and out of rabbit burrows; next day it too was trapped. The clearer weather on 23rd did not diminish the quality of migrants on the island, indeed it was a truly red letter day, with red or rather various shades of it to the fore. A male Red-backed Shrike joined still present Scarlet Rosefinch and Red-spotted Bluethroats, Robin and Redstart were seen but best of all was a superb Red-rumped Swallow\* which joined the local breeding Swallows. New for the island, this lovely bird flew within a few feet of the observers and perched on the wires near the ringing hut giving further close-range views. The Rosefinch, Thrush Nightingale and Red-rumped Swallow were still present on 24th but all had gone by 25th. A Red-backed Shrike was new on that date and was duly trapped along with a Black Redstart and a Blackcap. Migration slowed until 29th May when a Whinchat, Bluethroat, Black Redstart, Ring Ouzel and another Marsh Warbler were all trapped and ringed. For the third year in succession a Red-breasted Flycatcher was trapped on 31st May.

As often in the past, early **June** proved a good period for migrants with four Spotted Flycatchers, two Tree Pipits and a male Wigeon on 1st, and a Turtle Dove and two Cuckoos on 2nd. The 3rd brought a female Bluethroat and the 4th another Scarlet Rosefinch, which was trapped. An Osprey was sighted on 7th and an Icterine Warbler was trapped. A sprinkling of migrants on 8th included a male Bluethroat. Little else appeared until fog on 15th brought yet another Blue-

throat and a single Blackbird.

Autumn migration had its beginnings on 5th **July** with a Whinchat and a Black Redstart arriving. On 7th 40 Swifts and an Arctic Skua were seen and on 9th a male Ring Ouzel was trapped. On 18th a Greenshank and a Whimbrel were sighted but the prolonged warm weather had dried up all of the standing water usually so attractive to migrant waders. Six Storm Petrels were lured ashore on 30th.

**August** began with two Willow Warblers on 1st and a Cuckoo on 5th. Weather was calm and dry thereafter until 16th when an easterly breeze diverted a Snipe, a Reed Warbler and a Barred Warbler to the island. Movement of birds was poor, but on 22nd Willow Warblers totalled 150, with 16 Garden Warblers accompanying them. A Red-backed Shrike arrived on 23rd and four Pied Flycatchers were present on 24th. Three Barred Warblers on 25th were the best of a small influx and another was present on 29th.

**September** started with east winds and rain but little materialised on the island. Offshore two Sooty Shearwaters were seen on 4th and on 5th two Pomarine Skuas flew past. On land was a Green Sandpiper. A Peregrine, a Kestrel and a Merlin arrived on 6th perhaps attracted by the constant flow of Meadow Pipits with a grand total of 6,000 birds moving in the course of the day. 1500 Swallows were also noted and a flock of 99 Common Scoters counted at sea. Over the next few days Meadow Pipit numbers tailed off but clearly a large general movement had been under way. Land birds were sparse but sea watching was proving worthwhile. Thirty Sooty Shearwaters were counted on 12th and two "large" Shearwaters were seen. Also noted were one Pomarine Skua, one Great Skua and two Arctic Skuas. An easterly wind on 15th brought four Grey Wagtails and a Barred Warbler to the island while an early morning seawatch revealed two Great Skuas, three Arctic Skuas and the island's second record of Sabine's Gull. A Water Rail and a Corncrake were present on 16th and at sea 5 Black Terns flew past. Continuing easterly winds failed to produce any large falls of birds but by 22nd Long-eared and Short-eared Owls began to arrive. On 24th three Barnacle Geese were seen and a Jack Snipe was present. One of the few migrants present on 27th was a Red-breasted Flycatcher which was trapped. 150 Song Thrushes on 28th heralded the start of the thrush migration but numbers were generally unspectacular. At sea, 20 Manx Shearwaters and two Arctic Skuas were seen on 30th and a Peregrine was present.

Thundery squalls on 2nd **October** brought a selection of passerines into cover. A Sparrowhawk was trapped but the best bird was a Little Bunting\* which was mist-netted near the Low Trap. Passage on 4th included a Great Northern Diver, three Red-throated Divers, 21 Manx Shearwaters and three Great Skuas. On 5th a fall of migrants included a Red-breasted Flycatcher, two Black Redstart and a Yellow-browed Warbler. Finches were well represented with three Chaffinch, a Goldfinch, two Siskin, 65 Linnets, 15 Redpolls and five Snow Buntings. A Barred Warbler was trapped on 6th. Six Mute Swans flew past the island on 11th and on 12th four Whoopers, 22 Pink-footed Geese and 46 Greylag Geese did the same. Waterfowl continued to interest observers with 15 Red-breasted Mergansers counted on 13th. Westerly winds inhibited migration but a few species such as Jack Snipe, Woodcock and Snow Bunting joined 2500 Fieldfares and 1800 Redwings on 16th and made landfall against the wind. Amongst them were two Long-tailed Tits which were duly trapped and ringed. Gulls seen on 20th included 28 Common Gulls, eight Black-headed Gulls and an adult Iceland Gull. With only a few interesting records such as two Brent Geese and a Canada Goose on 22nd, three Tufted Ducks on 25th and a female Hen Harrier on 26th, October ended as wet as it had begun.

Thrush numbers in **November** were generally lower than usual with a maximum 1500 Blackbirds on 14th. A count of Woodcock totalled 60. Six Blackcaps were seen on 15th and on 18th a Brent Goose was present with six Snow Buntings and five Greenfinches, and finally, a first year Little Gull was found freshly dead.

### **Breeding birds**

Seabirds fared reasonably well with increases in some and decreases in others. Fulmars occupied a record 175 "sites", laid at least 95 eggs but produced 83 chicks—a drop of around 10% on last year. Shags laid a month late and active nests were down by some 200 to 1643. A "wreck" of mainly first and second year Shags in January and February will not show up in the breeding population until a couple of years time although those which did breed had a good season. Two broods of Shelducks were produced from at least nine active burrows and Eiders declined in numbers and nests from last year's record totals with around 413 nests found. Lapwings again laid in four nests and this time a single chick was known to fledge, the most successful season yet! Oystercatcher numbers were around normal with 29 pairs producing 19 chicks, of which 12 young are believed to have fledged. Kitt-





PLATE 31. Barn Owl, a species that is now scarce or absent from many Scottish farms. Its stronghold is the south west where this female was photographed.

*E. C. Fellowes*



An unusually good hedge in East Lothian (PLATE 32) large enough to support breeding Blackcaps (PLATE 33). Note the presence of tree, shrub and herb layers.

*S. R. D. da Prato*  
*E. C. Fellowes*





Large arable fields (PLATE 34) with low hawthorn hedges provide poor bird habitat. Even open country species such as the Curlew prefer unimproved grassland for nesting (PLATE 35).

*S. R. D. da Prato*

*E. C. Fellowes*





PLATE 36. Old railway lines provide better habitat for many songbirds than most Scottish hedgerows.

*S. R. D. da Prato*

PLATE 37. Thrush Nightingale on the Isle of May, 22-24 May 1984.

*J. Torino*



wake populations remain healthy but breeding Herring and Lesser Black-backed Gulls counted by NCC showed 2230 and 1485 pairs respectively. Culling was again carried out. While the larger gulls were increasing so too were the island's terns, with Commons reaching 36 nests by early August and a sudden and unexpected breeding group of Arctic Terns totalling 19 nests. This proved to be the first successful breeding of Arctic Terns on the Isle of May since 1956. Puffin numbers remain high but counts of Guillemots and Razorbills made by Dr Harris showed declines to 12,972 pairs and 1260 pairs respectively. Feral Pigeons bred and Stock Doves may have bred. Passerines breeding included Swallow, Pied Wagtail, Starling, Meadow Pipit and Rock Pipit. Rock Pipit numbers declined noticeably following gull culling, 31 pairs reduced to around 17 pairs, with only four young ringed. A pair of Carrion Crows built a nest on the wreckage of the "Mars" and hatched young but they mysteriously vanished before fledging.

### Ringling

Ringling effort varied through the season with passerine numbers lower than usual, mainly through their non-appearance. Shag ringling produced the record total of 1724, and record totals were also achieved with Guillemots 447 and Razorbills 87. Large numbers of Kittiwakes 758, and Puffins 1887 were also ringed. The Leigh Ringling Group are to be commended for their super efforts in ringling almost 2000 birds during their week's stay. Unusual or rare species ringed included a Cormorant, Sparrowhawk, Kestrel, five Woodcock, three Bluethroats, six Black Redstarts, two Marsh Warblers, an Icterine Warbler, five Barred Warblers, a Yellow-browed Warbler, Firecrest, two Red-breasted Flycatchers, two Long-tailed Tits, four Red-backed Shrikes, two Scarlet Rosefinches, a Hawfinch, Little Bunting and Thrush Nightingale. Quality birds, if not quantity. Ten Storm Petrels were tape lured to a net placed at the front door of the Observatory.

### Ringling recoveries

As if to celebrate the Observatory's Golden Jubilee in spectacular fashion some species chose to be recovered in exotic surroundings. Age codes are bracketed after species name.

Ringed Isle of May		Recovered/controlled	
Fulmar (1)	01.08.84	12.09.84	Vlissingen, Netherlands (exhausted)
Storm Petrel (4)	29.07.82	07.08.83	Fetlar, Shetland (control)

Ringed Isle of May		Recovered/controlled	
Shag (1)	09.06.83	21.01.84	Lier, Antwerpen, Belgium (sighted)
Shag (1)	08.06.83	07.02.84	Ijmuiden, Netherlands (oiled)
Shag (8)	11.06.74	17.06.84	Forth Road Bridge, Lothian (dead)
Shag (1)	13.06.83	09.04.84	Tay Road Bridge, Tayside (dead)
Shag (1)	17.06.82	04.03.84	Calais, France (dead, oiled)
Lesser Black-backed Gull (1)	09.07.82	06.02.84	Tan-tan, Western Sahara ("found")
Lesser Black-backed Gull (1)	14.07.83	26.07.84	Maze Prison, Lisburn, N. Ireland (tangled in plastic, released)
Herring Gull (1)	13.07.83	26.04.84	Limburg, Netherlands (dead)

Young Fulmars hit peak mortality soon after fledging in early September and sick or exhausted birds gravitate towards the southern north sea coasts, where they are washed ashore. Perhaps contrary to expectation Shags on the continent are uncommon unless, as above, they are "wrecked" by gales. Similarly Herring Gulls seldom cross the North Sea. The Lesser Black-backed Gull in W. Sahara is our furthest south recovery and the Irish recovery was clearly a jailbird!

Kittiwake (1)	23.06.82	27.08.84	Godthab, Greenland (shot)
Kittiwake (1)	24.06.84	12.09.84	Bonavista Bay, Newfoundland, Canada (killed)
Kittiwake (1)	23.06.83	21.04.84	Nador, Morocco (alive, released)

Three remarkable recoveries, our first from Greenland and Morocco and a very rapid and distant recovery of a first year bird in Canada. We have two previous records of second year birds in Newfoundland.

Guillemot (1)	25.06.83	25.01.84	Grimstad, Norway (dead in net)
Guillemot (1)	01.07.83	10.01.84	Aberavon, Wales (dead)
Guillemot (1)	12.06.83	15.11.83	Torshavn, Faeroes (dead)
Razorbill (6)	21.06.83	02.04.84	Bassin D'arachon, France (dead)
Puffin (8)	16.07.83	10.04.84	Hourtin-Plage, Gironde, France (dead)

Young auks such as the above Guillemots disperse far and wide after leaving the island, as do most young seabirds. Adult auks in recent years have tended to remain in southern North Sea or Biscayan waters over winter. Previous recoveries were largely from Scandinavian coasts.

Purple Sandpiper (6)	03.05.83	13.03.84	Zuidpier, Ijmuiden, Netherlands (sight record)
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Ringed Isle of May		Recovered/controlled	
Whimbrel (3)	05.09.83	16.12.83	Comporta, Estremadura, Portugal ("collected")
Our first Purple Sandpiper in Holland and our first, of only two ringed, Whimbrel wintering in Portugal.			
Blackbird (3)	28.12.82	24.05.84	Munster, Luneberg, FR Germany (roadkill)
Willow Warbler (3)	03.09.84	16.09.84	Lundy Island, Devon (control)
Goldcrest (3)	02.10.84	12.10.84	Kroonspolders, Netherlands (control)

The Blackbird was wintering on the island when ringed. The warbler and Goldcrest show quick movements south in autumn.

Ringed elsewhere		Recovered/controlled Isle of May	
Fulmar (1) Fair Isle, Shetland	28.07.71	24.06.84	(control)
Duncock (4) Morpeth Northumberland	10.04.84	19.04.84	(control)
Willow Warbler (4) North Ronaldsay, Orkney	04.06.84	07.06.84	(control)
Chaffinch (3) Haarlem, Netherlands	30.10.83	29.03.84	(control)

We have one previous record of a Fair Isle Fulmar chick on the May, but to date no island-born chick has returned to breed on the island. The Willow Warbler moved 354 kms in 3 days and the Chaffinch perhaps wintered in Britain since previous summer recoveries have been in Norway.

### Observatory notes

A chilling spring followed by a hot dry summer created some interesting changes in the island's fauna and flora. A Meadow Brown *Maniola jurtina* stayed some weeks and a Humming-bird Hawk Moth *Microglossum stellatata* was seen, but new to the island was the Latticed Heath Moth *Chiasmia clathrata*, an attractive day-flying species.

A school of nine Common Porpoises *Phocaena phocaena*, comprising adults and three young, moved northwards. Grey Seal *Halichoerus grypus* pups numbered 430 on 18th November, so catching up on last year's drop. Although not counted, the final total would probably be around 600 pups at the end of the breeding period. While Rabbit *Oryctolagus cuniculus* increased, the dry weather did not seem to benefit the House Mice *Mus musculus* and the population crashed in summer. Perhaps the Orcadian mice introduced during 1983 produced a strain unable to withstand the very arid conditions.

On the social side the Observatory held its commemorative dinner in an Edinburgh hotel and many of the founders managed to join in the evening's celebrations. Dr E. V. Watson gave the after dinner speech, reminiscing on that very first day in 1934 when he arrived on the island with R. M. Lockley, W. B. Alexander and H. D. F. Elder and logged the first entries in our unique handwritten history.

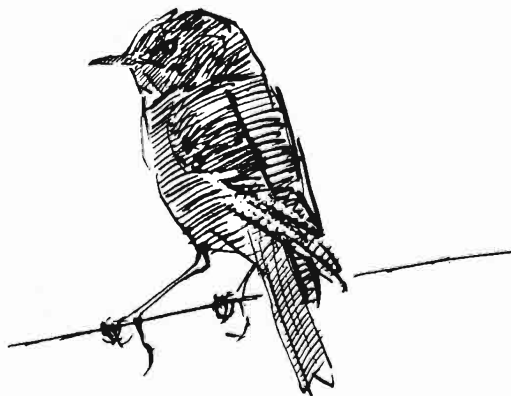
The Observatory received many gifts and donations during Jubilee year from visitors to the Low Light, ranging from paraffin lamps to cooking pots.

Cash from the efforts of John Callion (Cumbrian Run) and James Lough (sponsored bird count) were donated to the Observatory's common good and were very welcome.

The theme of the SOC's conference was the island and its wildlife and Keith Brockie's book (and film) "One Man's Island" added to the general celebrations, as did Mike Harris's book "The Puffin", based largely on his studies on the Isle of May.

We are grateful to all those who made our Jubilee year so eventful and enjoyable and in particular to our boatman Jimmy Smith for his help and expertise in landing the visitors safely. The Northern Lighthouse Board participated in celebratory events and we thank the Commissioners for their continued interest in the Observatory's work.

*Bernard Zonfrillo, 28 Brodie Road,  
Glasgow G21 3SB*





## Oil-related Eider mortality in Scapa Flow, Orkney

E. R. MEEK

During February/March 1984 an unusually high mortality of Eiders occurred in Scapa Flow, Orkney. Eiders normally make up only a small proportion of the corpses found on Orkney beaches, the figure for the period March 1978-February 1983 being just 3.3% of over 7000 corpses examined (Lea 1979, 1980; Adam and Reynolds 1981; Meek 1982, 1983). During February/March 1984, however, 97 Eiders were found dead in Scapa Flow, 32.3% of the total number of corpses found.

The first was found in Orphir Bay (see Fig. 1) on 17th February and the standard beached bird survey, between 22nd-28th February, revealed several more in the north and north-western parts of the Flow. In order to ascertain the full extent of the incident, extra beach walks were undertaken especially on sections of coast not normally covered. Of the 97 corpses located, 92 were on the Orkney Mainland, the major concentration being between Houton Head and Breck Ness. Five bodies were found on Hoy but, unfortunately, Graemsay could not be visited although local people noted numbers of dead Eiders ashore there too.

Over 80% of the corpses were adult drakes. A small number were heavily oiled but the majority showed only a light, fudge-coloured staining on the underparts, the cause of death not being immediately apparent. A single duck was dissected and examined at the height of the incident. A total of 42 parasitic worms, believed to be *Profilocollis botulus* were found in the intestine. Such a parasite load is not thought to have contributed significantly to the death of the bird since infestations of up to 1500 worms have been recorded elsewhere (Prof. G. Dunnet pers. comm). A dark residue was also taken from the duck's gut and sent for analysis to the Laboratory of the Government Chemist. The residue proved to be bio-degraded hydrocarbon oil, although the sample was too small to ascertain whether the oil involved was crude or fuel. Samples of obviously oiled plumage from two other corpses found at Scapa Bay on 22nd February and at Swanbister Bay on 2nd March were also submitted to the L.G.C. Both proved to be 'fairly fresh and only lightly weathered crude oil' (S. A. Bevan, pers. comm.); a third sample, from a bird found at

Stromness on 29th February, was described as 'well weathered and possibly biodegraded crude oil'.

A further sample of 11 corpses (eight drakes and three ducks) was sent to Dr H. Milne and C. A. Galbraith for post-mortem examination at the University of Aberdeen's Culterty Field Station. Traces of oil were found, either externally or internally, on all birds. Parasite loads varied from 'slight' to 'heavy' but none was considered to be at a level which would prove fatal. All the males and two of the females were well under normal weight. Contamination by oil was probably the indirect cause of death in eleven of the twelve birds examined, the poor condition of the birds possibly being due to the ingestion of light oil in small doses over a relatively long period (i.e. a few days to weeks). An alternative possibility is that

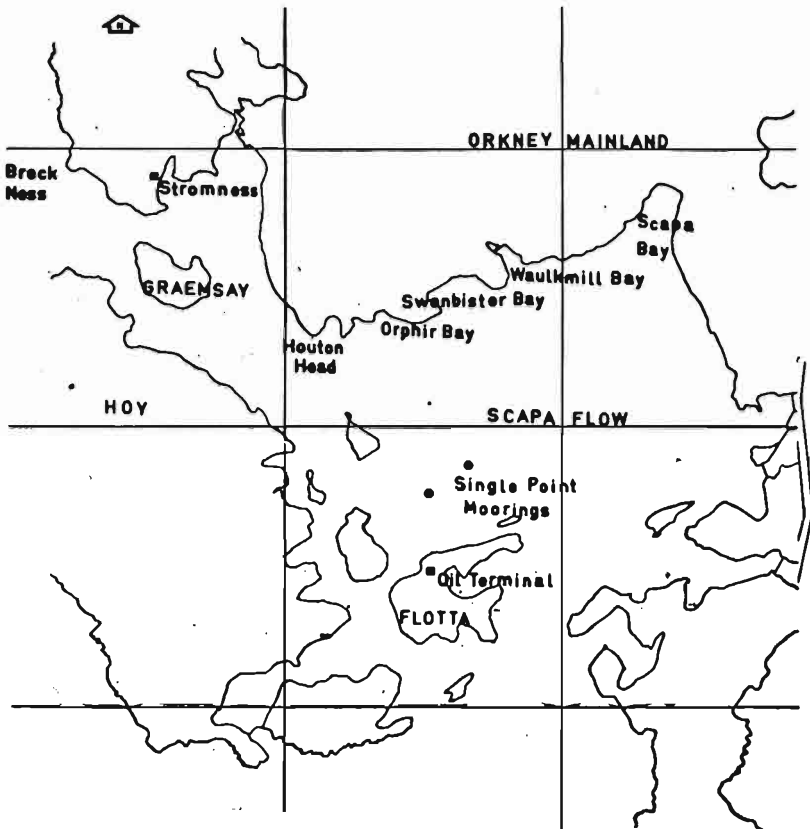


Fig. 1. Localities mentioned in the text

the birds may already have been in poor condition and contamination then hastened their deterioration. The twelfth bird, a female in good condition, was thought to have died more quickly, possibly ingesting a larger bulk of heavier oil than the other birds. (C. A. Galbraith pers. comm.).

The ultimate cause of this mortality seems likely to have been an oil spillage which occurred in Scapa Flow on 11th February 1984, i.e. six days prior to the first corpses being located and two to three weeks prior to the bulk of the birds being found. The spillage in question occurred when the Finnish Tanker 'Fanny' had just finished loading crude oil from the Flotta terminal at one of the single point moorings in the Flow. The cause of the spillage was a two inch hull fracture; official estimates at the time stated that the oil spilled amounted to some two tonnes. Booms were used to contain the slick while absorbents and mechanical means were used to disperse and break it up; no chemical dispersants were used (Capt. D. Robertson, Orkney Islands Council Oil Pollution Officer, pers. comm.). Nevertheless, despite these efforts, small quantities of an oily 'mousse' were coming ashore in Scapa and Waukmill Bays the next morning.

The sequence of events and the analyses performed clearly implicate the 'Fanny' spillage as the cause of the Eiders' deaths but there remain two puzzling factors. One is the extent to which other species escaped contamination. Of the 181 corpses of other species found on Scapa Flow beaches during February/March 1984, just 23 (12.7%) were reported as oiled and no deaths at all were reported amongst the internationally important concentrations of Great Northern Divers and Long-tailed Ducks which winter here. Secondly the high incidence of drakes among the Eiders that died remains to be explained. Drake Eiders are much more conspicuous than ducks and this may have led to some bias in the beached bird survey figures but the majority of beach walks were carried out by experienced observers aware of this problem, so this is not believed to be the full explanation. The incident occurred before duck and drake Eiders have separated for the breeding season and, although there is a degree of separation of the sexes during the winter period in some areas (C. A. Galbraith pers. comm.), this is probably not to the extent which would explain the observed difference in mortality.

## References

- ADAM, R. G. and REYNOLDS, P. 1981. Orkney Beached Bird Survey Report for 1980-81. Cyclostyled report. Kirkwall ■ LEA, D. 1979. Orkney Beached Bird Survey Report for 1978-79. Cyclostyled report. Kirkwall ■ LEA, D. 1980.

Orkney Beached Bird Survey Report for 1979-80. Cyclostyled report. Kirkwall ■ MEEK, E. R. 1982. Orkney Beached Bird Survey Report for 1981-82. Cyclostyled report. Kirkwall ■ MEEK, E. R. 1983. Orkney Beached Bird Survey Report for 1982-83. Cyclostyled report. Kirkwall.

E. R. Meek, RSPB Orkney Officer,  
"Smyril", Stenness, Orkney

## Short Notes

### Wellingtonias and Treecreepers

The first report of the Treecreeper excavating hollows in Wellingtonia trees in this country was in the annual report for birds for 1907 by John Paterson in the Annals of Scottish Natural History (Paterson 1908), though the habit is common in North America where the native Wellingtonia *Sequoia gigantea* and Redwood *Sequoia sempervirens* trees are used by the local race of *Certhia familiaris* (Moffit 1941). Paterson refers to his visit to Glendoune, Girvan, on 22 April 1905 to call on Mr Symon, the gardener there. He states 'The Tree-Creeper, Mr John Symon pointed out to me, has found the dry spongy bark of the Wellingtonia useful, presumably for nest building, and I found many—say 9-10—places in the trunk where the birds had hollowed out spaces'. He incorrectly assumed that these hollows were nest sites, and it was not until 1922 in Co. Down (Foster 1923) that the true story emerged.

To examine how the habit had fared since 1905, I recently visited Glendoune estate, Girvan, by kind permission of Major Young, to see the Wellingtonia in the grounds. There is only a single *S. gigantea*, evidently of a similar age (c.120 years) to all the others I have seen. I was struck by the fact that this tree had many more excavations than are usually found on a single tree—29 excavations as against 9-10 in 1905. The highest were about 6 m from the ground and were very shallow, hence most recently made. Many of the lower ones were markedly deeper and three had burrowed through a ridge of the bark. All looked old from their colour but some six had droppings below them indicating recent roosting. The number of hollows on this tree show firstly that it was colonised relatively early by Treecreepers and also that it had probably been in constant use since 1905 at least. The ease with which Treecreepers have found and made use of these trees since their introduction suggests a natural affinity (Moffit 1941) since they seem to prefer Wellingtonias, when available, to other roosting sites. The nature of the bark must be helpful both in providing insulation and in facilitating excavation, and thus may have survival value for the birds.

### References

- FOSTER, N. H. 1923. Sleeping habits of the Tree-Creeper. *Irish Nat.* 32: 1-2 ■ MOFFIT, J. 1941. Creepers and Sequoias. *Condor* 43: 75-76 ■ PATERSON, J. 1908. Report on Scottish Ornithology for 1907. *Annals Scot. Nat. Hist.* p 197.

NEAL RANKIN

### Common Gulls successfully nesting on a roof in Aberdeen

In 1984, a pair of Common Gulls successfully raised two fledglings, from a clutch of three eggs, on a flat office roof at Total Oil Marine, Altens, Aberdeen. The roof has been used as a nest site by Oystercatchers since the spring of 1982, soon after the building had been completed.

In the spring of 1982 and 1983 a pair of Common Gulls was seen to be prospecting the site, and roosting on the roof for most of the day during April and May. No serious attempts at either nesting or mating were made in these two years. In April 1984 a pair returned and indulged in nest building and pairing behaviour, including food begging and copulation. Nest material, mostly grasses and small twigs, was brought to the site and placed in a corner against a low balustrade which surrounds the roof.

During this time a pair of Oystercatchers had once again arrived and laid two eggs on the roof. Little or no aggression was displayed by either pair towards the other, rather they seemed to both benefit from the increased protective cover against crows and Herring Gulls provided by the non-sitting birds. Three eggs were laid around 12-13 May, and incubation, undertaken by both birds, lasted until 8 June when all three hatched. One chick died soon after becoming trapped between two pebbles on the roof, at a week old, but the other two fledged successfully and left the nest site about 9 July.

This appears to be the first recorded instance of successful nesting by Common Gulls on a roof, although Cramp, Bourne and Saunders (1974) record a failed attempt in 1971 at Dalcross Airport, Inverness. Common Gulls in Scandinavia frequently use man made sites, whilst Dutch and British birds do not seem to do so.

#### Reference

CRAMP, BOURNE and SAUNDERS, *The Seabirds of Britain and Ireland*. Collins 1974.

M. A. SULLIVAN

### Pied Wagtails roosting in birch tree

With reference to the short note "Unusual roost-site of Pied Wagtails" (SB 13: 115-116), I am writing to record another unusual site. For several years Pied Wagtails have roosted in a young birch tree in a landscaped area between buildings at Raigmore Hospital, Inverness. The birds appear in autumn and roost in the tree every night until spring, gathering on the roofs of nearby buildings before moving into the tree as darkness falls. The tree is in an exposed, windswept position and on windy nights it sways wildly. The windows of a laboratory are only about 3 feet from the tree and the lights in the lab. are switched on and off several times during the night, but the birds do not seem to be disturbed. The Pied Wagtails leave at dawn and are only occasionally seen during the day. On average about 30 use the roost each night, 50% of them first-year birds.

CAROL A. MUNRO

### Dipper covering eggs

On 26 May 1984 I discovered a typical Dipper nest on the Dighty Water, Tayside. The interior of the nest had the usual lining of dead leaves but it did not appear to contain any eggs. On returning to the site some hours later I observed a female leaving the nest. I inspected the nest again and, on moving the leaves, was surprised to discover a full clutch of eggs. I made further visits to the nest throughout the incubation period and on each occasion the eggs were concealed by dead leaves. I have never before recorded Dippers covering their eggs with leaves and cannot find any reference to this behaviour in the literature.

M. PURVEY

### Glider attacked by Golden Eagle

On 27 October 1984 my friend John Anderson (also an ornithologist) and I were flying two single-seater gliders at North Connel, Argyll, making use of the uplift created to maintain a height of about 450 m. At about 1500 hrs we both spotted a Golden Eagle which had joined us in the uplift. Gliders have to maintain a steady air speed of about 40 knots when using the uplift and therefore making a series of beats to and fro along the hillface; the eagle, with a superior soaring ability and much slower stalling speed, was able to maintain position over the steepest part of the face. We had both passed fairly close below the eagle in order to obtain a better view and make positive identification, but when John made his next beat along the face he observed the bird in a steep dive towards him. He expected it to flatten its dive and pass overhead but instead he felt a violent blow on the tail of the aircraft. As gliders are lightly constructed and easily damaged, especially around the control surfaces, he immediately returned to the airfield and landed. A close check showed no apparent damage, but several weeks later an area of paint on the tail fin started to craze and flake off.

I had not witnessed the actual attack so continued soaring, finally landing just before dusk. After hearing about the incident I climbed back up the hill and was fortunate enough to locate the bird lying dead in the heather near the summit. It was a fully adult male weighing 7½ lbs and with a wingspan of just under 2 m. It had not been ringed. Measurements showed it to be a small bird, even for a male. Its crop was empty and later examination of the carcass showed the stomach to be almost empty except for a pellet and a small amount of paste-like material. Tests for organochlorine residues showed very low levels—a reassuring piece of information to come out of the incident. The eagle had obviously died as a result of the impact and its injuries included a broken leg, a broken wing and a crushed breastbone.

Just why an eagle should attack a glider can only be a matter of conjecture. Beinn Lora is not within a known eagle breeding territory, although eagles certainly breed not many miles away. The hill has been used regularly for five years by the gliding club without any similar incident, though other species of soaring birds such as Buzzards, Kestrels, Ravens and gulls often use the uplift in close proximity to the gliders. This bird might have seen the aircraft as rivals on its hunting ground or may simply have resented their presence. Eagles are themselves regularly mobbed by birds such as Ravens and crows and by smaller raptors, usually without any actual contact, and this individual

might have been indulging in a similar sort of sporting activity. However, the fact that the attack was pursued so violently suggests that there was much more aggression in this case.

There is only one previous record of an eagle attacking an aircraft in Britain—in the Ben Wyvis area of Ross-shire during the second world war, when an RAF pilot had an anxious few minutes avoiding the dives of a pair of eagles (Seton Gordon—*The Golden Eagle* p 112 & p 134). There have been two recent cases involving gliders in Italy. A British pilot flying near Aosta in April 1984 was attacked three times by an eagle, which hit the tail twice and the front canopy once. The pilot returned to the vicinity later and obtained a photograph which showed the bird to be an immature Golden Eagle (*Sailplane and Gliding*, Vol. XXXV No. 4, August 1984). A later report in *The Times* gave details of an eagle making at least four attacks on an Italian hang glider pilot in the Dolomites. No reference is available for this incident but the story was repeated in *Sailplane and Gliding* of October 1984.

MIKE GREGORY

## Review

**The Growth and Development of Birds** by R. J. O'Connor; Wylie; 1984; 326 pp; 96 line illustrations; £20.

Science, whether pursued by experiment or observation, may be viewed most simply as a process of classification: the reduction of natural phenomena into easily described units and the assembly of these units into a logical pattern. In this book, O'Connor condenses the diversity of avian lifestyles and growth patterns into an adaptive, ecological framework. After an introductory chapter explaining different modes of post-natal development, the author traces avian development in sequence from the egg, through hatching, post-natal growth and development to senescence of the adult bird. The book is not confined to the purely physical processes of growth but covers the development of behaviour, in both parent and offspring, as an essential component of successful reproduction.

*The Growth and Development of Birds* is definitely a 'whole-animal' book: finer points of egg and neonate physiology, anatomical development and, disappointingly, feather development, are not covered or only briefly referred to. Unlike Murton & Westwoods' *Avian Breeding Cycles* (with which there is only a slight overlap) this is not a detailed analytical review and the treatment of some subjects (eg. incubation) lacks depth. In my view, the book's major shortcoming results from the large amount of material summarised in such a relatively short book. In places, facts are presented without sufficient supporting argument and some statements appear glib.

Nevertheless, this book is a very wide-ranging, but lucid and original synthesis of the 'state of the art' of growth and development in natural populations. Recent detailed reviews are, after all available elsewhere (eg. *Avian Biology* series, eds. Farner, King and Parkhouse, Academic Press). The text is written in a concise but relaxed and very readable style. Overall, this is an excellent book and should widen every ornithologist's horizons.

CHRIS REDFERN

## Short Reviews

**Breeding Biology of the Adelie Penguin** by D. G. Ainley, R. E. LeResche and W. J. L. Sladden; University of California Press; 1983; 240 pp; 15 monochrome plates, many figures and tables; £30.95.

The title says it all. The Adelie is the most numerous and widely distributed penguin of the Antarctic and sub-Antarctic. This book is based on 15 years "summer" field work on 4,500 Adelies at a rookery on Cape Crozier, Ross Island, 77°S. The Adelie is now arguably the best studied sea-bird ever, except perhaps for the Herring Gull.

JOHN DAVIES

**Ocean Birds, their breeding, biology & behaviour** by L. Lofgren; Croom Helm; 1985; 240 pp; 200 colour plates, many figures; £16.95.

This wide ranging book covers all aspects of the life of ocean birds from evolution to interrelationships with man. The text is copiously illustrated with colour plates, line drawings, paintings and diagrams.

**Shorelands Summer Diary** by C. F. Tunnicliffe; Orbis; 1985; 160 pp; many colour and black & white illustrations; £9.00 (S).

Well produced reprints are always welcome and this one will be applauded by all Tunnicliffe enthusiasts. The book is an account of Tunnicliffe first at his home on Anglesey in 1947 and is beautifully illustrated with his drawings and paintings. Also available in hardback (Clive Holloway Books) £12.95.

**A Lighthouse Notebook** by N. McCanch; Michael Joseph; 1985; 200 pp; many colour and black & white illustrations; £12.95.

Norman McCanch's book takes the form of a diary describing his life as a lighthouse keeper and the many birds resident on, or attracted to, the islands he lived on. The text is illustrated by McCanch's sketches and watercolours.

**Vulture Biology and Management** by S. R. Wilbur and J. A. Jackson (eds); University of California Press; 1984; 550 pp; many figures; £36.75.

This book is divided into seven parts containing a total of 32 chapters by various authors. Paleontology, status, biology, management and environmental effects are covered and the final chapter is a useful bibliography.

**The Countryside and Wildlife for Disabled People** by A. Chapman; RADAR; 1985; 392 pp; maps; £1.

A regional access guide to the UK.

**Eric Hosking's Wildfowl** by E. Hosking and J. Kear; Croom Helm; 1985; 153 pp; many colour plates; £14.95.

The now familiar format of Eric Hosking's books is repeated in this volume on Wildfowl. Hosking's photographs are accompanied by Janet Kear's authoritative text.

**British Birds in their Habitats** by R. Freethy; Crowood Press; 1985; 207 pp; 26 colour plates, black & white plates and drawings; £10.95.

Freethy has divided Britain into nine different habitats; for each he



gives a brief history and description before species accounts which relate the bird to its habitat. The classification of birds by habitat is always difficult and not everyone would have chosen this classification, but the book is still an interesting introduction for the beginner.

**The Concise Birds of Britain & Europe** by H. Heinzl; Hodder & Stoughton; 1985; 64 pp; many colour illustrations; £2.95.

An illustrated 'tick list' of European birds with a few words of description for each species. The use of this 'tick list' will be limited as it has only one 'tick box' for each species.

**Marine Birds: their feeding ecology and commercial fisheries relationships** (Proceedings of the Pacific Seabird Group Symposium, Seattle, Washington, 6-8 January 1982.) Ed. D. N. Nettleship, G. A. Sanger and P. F. Springer. Canadian Wildlife Service, Ottawa.

Parts I and II mainly comprise accounts of the feeding habits of marine wildfowl and of pelagic seabirds respectively: they will interest specialists. Part III comprises studies of the interaction of seabirds and fisheries: it will be valuable to anyone interested in the conservation of either seabirds or fisheries.

**ITEMS OF SCOTTISH INTEREST** Articles and reports on birds in Scotland, mainly on status and distribution. Some biological studies are excluded, as are references from the widely available journals **British Birds**, **Bird Study**, and **Ringing and Migration**. Most of these items 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.

Scavenging and predation upon sheep and lambs in West Scotland. R. Hewson 1984. *J. Applied Ecol.* 21: 843-868. (Predation by Golden Eagles and foxes).

Seasonal trend in the breeding performance of Sparrowhawks. I. Newton & M. Marquiss 1984. *J. Anim. Ecol.* 53: 809-829. A study in Scotland.

Vocal mimicry in Starlings. A. M. Hindmarsh 1984. *Behaviour* 90: 302-324. A study in Scotland.

The Peregrine population in the Loch Lomond-Trossachs area of Scotland between 1961 and 1981: a review. J. Mitchell 1984. *Glasgow Naturalist* 20: 389-399.

Forth Area Bird Report (Clacks, Stirling, Southwest Perth) 1982. C. J. Henty 1984. *Forth Naturalist and Historian* 7: 45-56.

Angus and South Kincardine Bird Report 1981/2. N. K. Atkinson 1984. *Angus Wildlife Review* 6: 21-48.

*Ayrshire Bird Report* 1984 (39 pp). A. Hogg (ed) 1985. Includes reports on Siskins in South-West Scotland, on wildfowl and wader counts, and on Mute Swans in Ayrshire in 1984. Available from the SOC Bookshop £1.50 post free to SOC members.

A guide to the birds of Mid-Argyll, Kintyre and Cowal. (34 pp). G. Murray & C. McLaren 1985. Available from the SOC Bird Bookshop £1.25 post free to SOC members.

North Ronaldsay Migration Report no. 2 (15 pp). J. J. Sweeney 1984. This report covers the period 19th September to 1st October 1984.

*Wader Study Group Bull.* 43 (April 1985). Includes progress reports on the effects of severe weather on waders, on the West Coast Spring Passage Project, and on the surveys of breeding waders in the southern isles of the Outer Hebrides.

Two cases of Guillemots helping to rear neighbours' chicks on the Isle of May. S. Wanless & M. P. Harris 1985. *Seabird* no. 8, 5-8.

- Examination of corpses of auks beached on East British coasts in February 1983. P. Hope Jones, C. F. Barrett, G. P. Mudge & M. P. Harris 1985. *Seabird* no. 8, 9-14. Includes the auks beached in the Moray Firth.
- Breeding Skuas in Orkney. E. R. Meek, C. J. Booth, P. Reynolds & B. Ribbands 1985. *Seabird* no. 8, 21-29.
- Assortative mating in Arctic Skua populations in Orkney and Shetland. P. O'Donald 1985. *Seabird* no. 8, 29-33.
- Distribution and feeding habits of the Great Skua in the North Sea. M. L. Tasker, P. Hope Jones, B. F. Blake & T. J. Dixon 1985. *Seabird* no. 8, 34-44. The greatest concentrations are off the northeast coast of Scotland.
- Great Black-backed Gull predation of seabird chicks on three Scottish islands. K. Taylor 1985, *Seabird* no. 8, 45-52, Sule Skerry in Orkney and Dun and Boreray in St Kilda.
- Growth, diet and mortality of Arctic Tern chicks in Shetland. P. J. Ewins 1985. *Seabird* no. 8, 59-68.
- Manx Shearwaters breeding in the Isle of Muck. R. H. Dobson 1985. *Glasgow Naturalist* 20(5), 491. Eggs and a well-grown chick established the presence of a small breeding colony on the island.
- Energy expenditure by free-living Dippers in winter. D. M. Bryant, C. J. Halls & R. Prys-Jones 1985. *Condor* 87, 177-186, a study on the River Devon, near Stirling.

W. HARPER

## Notices

**British Birds** We are again able to offer SOC members a significant discount off the normal subscription rate for *BB*. We thoroughly recommend this excellent monthly magazine for birders, keen birdwatchers and amateur and professional ornithologists. Subscriptions should be made using the enclosed form and sent to Mrs Erika Sharrock, B.B. Subscriptions, Fountains, Park Lane, Blunham, Bedford MK44 3NJ.

**British Ecological Society Grants** The BES is offering grants ranging from £50 to £500 to amateur and professional scientists undertaking ecological research and survey, usually within the United Kingdom, but grants are also given to projects abroad. Application forms are available from the British Ecological Society (SEPG), Burlington House, Piccadilly, London W1V 0LQ. Further details from Dr M. B. Usher, Department of Biology, University of York, York YO1 5DD.

**BTO/SOC Wintering Cormorant Survey 1985/86** The aim of this survey is to make monthly counts of wintering Cormorants at all coastal and inland waters in the United Kingdom between September 1985 and April 1986. In addition three counts of all known roost sites will be made. By the time this article appears volunteer counters should have been recruited to cover all Scottish waters. Help will still be required in some areas however. Anyone interested in taking part in the survey should contact Neil McCulloch or Dr Jeremy Greenwood, Dept. of Biological Sciences, The University, Dundee DD1 4HN, and they will be put in touch with their regional organiser. The survey is supported by the RSPB and the Ministry of Agriculture, Fisheries and Food.

**SWT Lecture** Sir David Attenborough will speak on 'Travels of a Naturalist' in the Usher Hall, Edinburgh, at 7.30 pm on Monday 4th November. Tickets available from the Usher Hall booking office at £6, £5, £4 and £2, from mid-September.

# The Scottish Ornithologists' Club

## SUBSCRIPTIONS 1985/86

We are very grateful to all those Club members who have already paid their subscriptions at the new rates, particularly those who have completed a new banker's order and/or covenanted their subscription. Those members who have not already renewed their subscriptions will find a Membership Renewal Form enclosed with this journal. Please complete and return the form now. And please, if at all possible, help the Club increase the value of your subscription by completing the Deed of Covenant, and help the Club to save money by completing the Banker's Order.

## ANNUAL CONFERENCE and AGM

The 38th Annual Conference, "Scottish Forestry & Birds", and 49th AGM of the Club will be held during the weekend 1st-3rd November 1985 in the Marine Hotel, North Berwick, East Lothian. The conference programme, booking form and AGM agenda are enclosed with this issue of *Scottish Birds*.

## ANNUAL RAFFLE

A book of raffle tickets is enclosed with this issue of *Scottish Birds*. We apologise to those members who do not like to receive raffle tickets in this way. However, the Club's finances benefit significantly from the annual raffle. Additional books of tickets are available at Branch meetings or direct from Miss Pat Webster, the Membership Secretary. Ticket counterfoils and payments must either reach Pat Webster at the SOC offices by 31 October, or be handed in at the Conference before the draw.

## ENDOWMENT FUND GRANTS

This year 13 Club members received grants totalling £1,450. Grant applications for 1986 must be made on forms obtainable from John Davies, the Club Secretary, and submitted by 31 December 1985.

## WINTER FIELD TRIPS

### AYR BRANCH

Sunday, 29 September 1985. BARRASSIE & TROON. Meet Wellington Square, 1.45 pm or Barrassie beach car park, 2.00 pm. Leader, I. M. Leach.

Saturday, 26 October 1985. MAIDENS/TURNBERRY. Meet Wellington Square, 9.30 am or Maidens, 10 am. Leader, R. Hisset.

Saturday, 16 November 1985. MARTNAHAM. Meet Wellington Square, 1.45 pm or Martnaham Lodge Gatehouse, 2.00 pm. Leader, Miss Mary Hogg.

Sunday, 26 January 1986. BARONS HAUGH RSPB RESERVE. Meet Wellington Square, 9.15 am or Dalziel House car park (NS 760550), 10.30 am. Leader, Mrs Jean Burton.

Sunday, 16 March 1986. GLENBUCK. Meet Wellington Square, 1.00 pm or Glenbuck, 2.00 pm. Leader, W. McKechnie.

### ST ANDREWS BRANCH

Sunday, 22 September 1985. FIFE NESS. Meet at Kilminning Castle, 7.00 am and again at 10.30 am.

Sunday, 20 October 1985. ISLE OF MAY. Meet at Crail Harbour, 9.45 am. Cost about £5. Bring lunch.

Sunday, 17 November 1985. LOCHORE MEADOWS. Meet at the Visitors' Centre, 10.00 am.

Sunday, 15 December 1985. EDEN ESTUARY. Details from Miss Betty Rowling, 064 43 226.

### STIRLING BRANCH

Lecture meetings this season will be held at the Stirling Smith Art Gallery and Museum, Dumbarton Road, Stirling.

### ROOF REPAIRS

By the time this issue of the journal is published, major repairs to the roof of 21 Regent Terrace will be under way. The disruption to Club members and staff should be significantly less than that caused by the recent replumbing. This work is the first phase of a major repair and maintenance programme planned for the exterior of the house. The cost of the work, £8,000, is being funded initially by borrowing from the Club's Endowment Fund.

### NEW TELEPHONES

British Telecom (BT) installed a new telephone exchange for the SOC offices in July. It replaced a system installed in 1959 and the only working one of its kind left in the Edinburgh area! BT had declared it redundant and were unable to maintain it any more. The new exchange has two lines, ten extensions and an answering machine for receiving calls out of office hours. We are sure this will enable us to give a better service to Club members and our Bookshop customers.

### NEW MICRO-COMPUTER

A new micro-computer system, based on a BBC Model B, is now working in the SOC offices. Initially it is being used for production of the Bookshop catalogues and customer mailing lists. Later it will be used for Bookshop stock control and SOC accounts. It is also hoped to produce Scottish Ringing Reports, for inclusion in the Scottish Bird Report, using this system.

### BOOKSHOP STAFF

Peter Bell rejoined the staff as assistant manager in August after his sojourn on the Farnes Islands. We are very pleased to have him back. Alex Thom, a Club member from Linlithgow, worked with us for a few months as a temporary, part-time bookshop assistant. We were very grateful for his help in time of need. Sarah Abbott, an Edinburgh University ecology student, worked as a temporary bookshop assistant during her summer vacation inputting data to the new micro-computer system.

### EXPULSION

At a recent meeting Council decided to expel a member found guilty of an offence under the Wildlife and Countryside Act 1981.

### BRANCH NEWS

**Stirling Branch Argyll Weekend, 1-3 March 1985.** A change of venue, to the "Galley of Lorne" Hotel, Ardfern, and a change in the main excursion brought a rather different flavour to one of the Stirling Branch's oldest institutions, the Argyll Weekend. Thirteen members enjoyed this year's trip and those able to travel over on the Friday met a welcome improvement in the weather from the cloud and rain of Stirling. We found ourselves sharing the hotel with a group from the Marine Conservation Society—*non sequiturs* arising from enquiries as to the whereabouts of 'divers' were largely avoided.

On Saturday, after a necessarily brief perusal of the Greenland White-front flock at Rhunahaorine, we took the ferry to Gigha. A surprise on the beach at Tayinloan was the appearance of a lively female Black Redstart. Much of our time on the island was spent trying to decide

which of the winter-plumaged divers were Great Northern and which Black-throated. Fortunately several superb Blackthroats in breeding plumage presented no problems. Also good for our eastern eyes were the gangs of Tysties close inshore, small parties of Rock Doves and, after much searching, a couple of Stonechats. Back on the mainland, the Black Redstart had turned coy and proved adept at utilising the available cover. As a result, natives were treated to the sight of an odd bunch of incomers apparently taking considerable pains to photograph a decrepit old caravan.

Saturday night's hotel lounge species list of 85 was voluntarily reduced to 80 in the cold light of Sunday morning, but pre-breakfast Peregrine and Water Rail raised hopes of restoring a respectable total. In the event visits to Crinan Moss and Loch Sween in deteriorating weather were not too productive, but further sightings of Great Northern Diver, Hen Harrier and Stonechat rounded the weekend off nicely before the heavens really opened and persuaded the last of us to head for home.

D.T.

## 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 local recorders at the end of March, June, September and December. The period April to June is covered here.*

After an influx of early migrants in the northern isles at the beginning of April, spring was cool, with long periods of northerly winds which delayed many summer migrants. However falls in mid May produced huge numbers of **Bluethroats** and other drifted migrants, as well as some amazing rarities. Two apparent first records for Britain which occurred in Shetland could unfortunately have escaped from captivity and will have to wait for the verdict of the BOU.

Shetland had no less than 3 **White-billed Divers** and South Uist a **Pied-billed Grebe**. A **Great White Egret** in Caithness may have been the same one seen in Shetland by a few lucky folk. Wildfowl of note included a **Bewick's Swan** at Loch of Spiggie in April, 2 male **Mandarins** on Papa Westray and Unst, an **American Wigeon** at the Endrick Mouth and a **Green-winged Teal** on North Uist, whilst the **Black Duck** remained at Tynninghame. **Garganey** visited Loch of Strathbeg, Orkney and Shetland and **Ring-necked Duck**, Shetland and Kirkcudbrightshire. Lerwick had a female **King Eider** and Fair Isle a fine male. Larger than usual numbers of **Common Scoter** were in the northern isles, and a male **Surf Scoter** was at Gosford in April. Three **Ruddy Duck** were seen at Loch of Strathbeg, with another at Sand Loch and one in Fife. Two **Honey Buzzards** seen in Shetland both died. Fair Isle had a **Marsh Harrier** and 4 more were seen in Aberdeenshire. A **Goshawk** was on Hoy and a **Common Buzzard** was a victim of **Fulmar** oil in Shetland. Single **Rough-legged Buzzards** stayed in Orkney and Shetland into April whilst at least 6 **Ospreys** reached Fair Isle and Shetland. **Red-footed Falcons** in Aberdeenshire and near Stirling and **Hobbies** on Fair Isle and at Fife Ness were out-classed by an **Eleonora's Falcon** (first Scottish if accepted) on South Uist. The only **Quail** reported were singles on Fair Isle and in Ayrshire. A **Spotted Crane** was trapped on Fair Isle and single **Corncrakes** called in Shetland, Aberdeenshire and Fife. At least 3 **Cranes** were involved in records from the north isles and South Uist. Waders included a **Stone Curlew** in Shetland, a **Kentish Plover** at Aberlady, 4 **Dotterel** in the Lammermuirs and 2 on North Ronaldsay (probably the same ones seen later on Fair Isle), 2 **Little Stints** on Fair Isle and 2 others in East

Lothian, and single **Temminck's Stints** in Shetland and at Aberdeen. Were the **Pectoral Sandpiper** and the **Broad-billed Sandpiper** seen at Sumburgh in late May the same birds seen in Orkney in early June? Fair Isle had 50 **Woodcock** on 8th April. Small numbers of **Black-tailed Godwits** in the northern isles reached a maximum of 10 at Quendale, where a **Spotted Redshank** was also seen. A few **Green** and **Wood Sandpipers** were also in the northern isles. Single **Pomarine Skuas** were on Whalsay and at Fraserburgh, but over 100 were seen from an oil platform north of Shetland in May. There was an adult **Long-tailed Skua** on Fair Isle in June, a **Mediterranean Gull** at Musselburgh in April and a **Little Gull** in Orkney. A **Ring-billed Gull** was also at Musselburgh in April when a maximum of 3 **Iceland Gulls** were seen there with 4 also at Fraserburgh. A **Roseate Tern** was at Girdleness, a **Black Tern** at Aberlady and rarer still, a **White-winged Black Tern** in Orkney. At least 10 **Turtle Doves** were on Fair Isle and in Shetland where there were also 9 **Long-eared Owls**, 6 unfortunately dead. Papa Westray was visited by a **Scops Owl** and Orkney also had a **Snowy Owl**. Single **Nightjars** were on North Ronaldsay and Unst. A **Little Swift** in St Andrews was a very lucky find. **Hoopoes** were seen on Bressay, Shapinsay, and at Fife Ness. **Wrynecks** appeared in good numbers, with at least 40 in the northern isles, 5 on the Isle of May and 8 along the east coast.

Fair Isle and the Isle of May each had a **Short-toed Lark**, whilst Fair Isle also had a **Woodlark**. The Isle of May had a very unusual spring **Olive-backed Pipit** and 160 **Tree Pipits** landed on Fair Isle on 14th May. Small numbers of **Grey-headed Wagtails** reached the northern isles. A **Cedar Waxwing** on Noss at the end of June could have come out of a cage, but if not is a first for Britain. A **Black-bellied Dipper** was on Fair Isle where 150 **Robins** landed on 5th April, when 300 were on North Ronaldsay. Two **Thrush Nightingales** on Fair Isle and another on Whalsay were joined by similar numbers of **Nightingales**. The massive fall of **Blue-throats** involved about 25 in Shetland, 150 on Fair Isle (with at least 70 in one day), 30 in Orkney, 100 on the Isle of May and at least 52 on the east coast. Earlier, 33 **Black Redstarts** were in the northern isles. 120 **Redstarts** were seen on Fair Isle on 13th May. There were 5 **Marsh Warblers** in the northern isles, with singles on the Isle of May and one singing at Aberlady, but only for one day. **Great Reed Warblers** were on Out Skerries and at Girdleness. Fair Isle had 2 **Icterine Warblers** in June and a **Subalpine Warbler** in May. A **Red-breasted Flycatcher** was in Shetland, with 2 on Fair Isle, where there was also a **Golden Oriole**, with another at Quendale and one in South Uist. The mid-May fall resulted in at least 100 **Red-backed Shrikes** in the northern isles with 4 on the Isle of May and at least 20 along the east coast. Eight **Great Grey Shrikes** were in Shetland in the April fall. Adult **Rose-coloured Starlings** were on Yell, Fair Isle and South Uist. The immaculate **Daurian Starling** on Fair Isle in May could be another first for Britain and couldn't possibly be an escape, could it? A **Goldfinch** was on Fetlar in May, and flocks of **Mealy Redpolls** reached 45 at Sumburgh and 20 on Fair Isle, whilst a pair bred in Orkney. Two **Arctic Redpolls** were on Fair Isle. A large irruption of **Common Crossbills** began to arrive in the northern isles in early June. Of 8 **Scarlet Rosefinches** in Shetland, 5 were red males, but the singles on Fair Isle and at Fife Ness were not. A few northern **Bullfinches** reached the northern isles, but more unusual were the 16 **Hawfinches** in Shetland, with another on Fair Isle and 2 in Orkney. Three super male **Lapland Buntings** were in Shetland where there was also an influx of **Yellowhammers**. Fair Isle had 2 **Ortolan Buntings**, with singles on Out Skerries and at Fife Ness. **Rustic Buntings** were on Whalsay and at Virkie with 2 on Fair Isle which also had 2 **Little Buntings** and even rarer for there, a **Corn Bunting**.

PETE ELLIS

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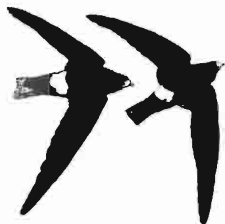
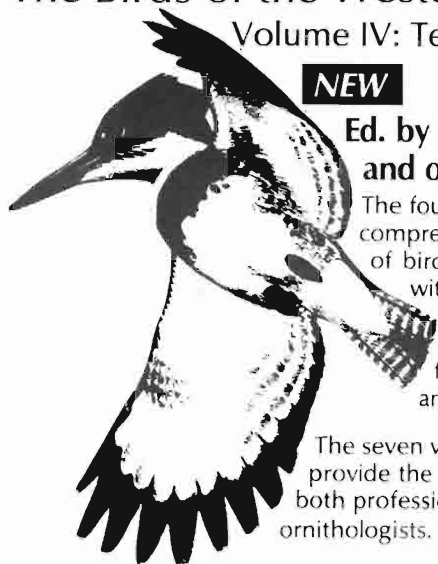
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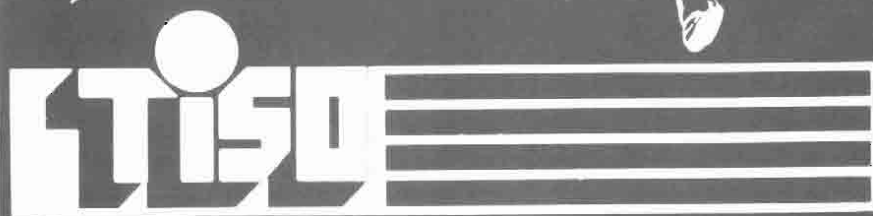
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