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THE JOURNAL OF THE SCOTTISH ORNITHOLOGISTS' CLUB

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THE JOURNAL OF THE SCOTTISH ORNITHOLOGISTS' CLBB



Vol. 7 No. 8

Winter 1973

Edited by Tom Delaney assisted by D. G. Andrew and B. G. Grattage

Editorial

Editorial arrangements. With the issue of this, the last number of Volume 7, we now pass the *Scottish Birds* editorial mantle to Harry Greig, together with all best wishes. The editorial office is now at Club headquarters, at 21 Regent Terrace, Edinburgh EH7 5BT, and we ask contributors to write to that address.

Membership Secretary. Many members will know that a great deal of Bookshop work was done by Mrs Ruby Smillie in the past, in addition to her main job as Membership Secretary. Now, with a membership that has more than doubled since she joined the staff in 1963, Mrs Smillie is no longer responsible for Bookshop administration, except for receipt of payments. We would like to take this opportunity to acknowledge the work she has done for the Bookshop and the conscientious and thorough way in which all her work is carried out. It is also an appropriate time to thank her husband, Mr James Smillie, for all the help he gives at Conferences and Edinburgh Branch meetings.

Local recorders. Records for East Stirlingshire and Clackmannanshire are at present handled together with those for Fife by David Oliver. His original area was East Fife only, but he stepped into the breach when a new recorder was needed for the adjacent areas. Now Dr C. J. Henty has been appointed local recorder for East Stirlingshire and Clackmannanshire, and David Oliver will continue to deal with records for the whole of Fife. Their addresses are:

Fife David Oliver, East Cottage, Balass, Cupar, Fife.

East Stirlingshire, Clackmannanshire Dr C. J. Henty, 3 The Broich, Alva, Clackmannanshire.

Current literature. Recent material of Scottish interest includes:

Seabird Report 1971; includes papers on Gannets on St Kilda, Great Black-backed Gulls in west Scotland. Available from Secretary, Seabird Group, c/o Zoology Dept., Tillydrone Avenue, Aberdeen AB9 2TN.

Shore Larks summering and possibly breeding in Scotland. A. Watson, 1973. Brit. Birds 66: 505-508.

CLUB ACTION IN SUPPORT OF CONSERVATION

In 1972 Council considered most carefully the policy of the Club regarding the ever increasing threat to birds in Scotland as a result of pollution and industrial development. Council's statement setting out the policy of the Club on conservation and the environment was adopted at the Annual General Meeting in October 1972, and was published in Scot. Birds 7: 167-169.

In general the policy is for the Club to supply facts and data io conservation bodies such as the Royal Society for the Protection of Birds, Scottish Wildlife Trust and Nature Conservancy, but not to develop into yet another conservation body. Normally the Club will not take independent action on conservation matters, but will lend full support to voluntary and governmental bodies in particular cases. Council wishes to encourage individual members to help in a number of ways such as giving support to the voluntary conservation bodies, helping with annual counts and enquiries, and reporting to local representatives and to the Club Secretary any development posing a threat to birds or the environment.

To keep members better informed it is intended to publish articles in Scottish Birds from time to time, and report on assistance given or action taken by the Club. This is the first report and covers the period from October 1972 to the end of 1973. During this time the Club took action on threats to wildlife in two areas on the northeast coast—the Cromarty Firth in Ross-shire and the Loch of Strathbeg in Aberdeenshire.

Early in 1972 the Government issued a Draft Order setting up a Cromarty Firth Port Authority. The Draft Order gave no safeguard to the environment or the wildlife in the Cromarty Firth and so the Club petitioned jointly with the Royal Society for the Protection of Birds, the Scottish Wildlife Trust and the Wildfowl Trust against the Order. A Hearing by a Parliamentary Commission in April 1973 resulted in the promoters of the Draft Order offering a deal during the first day of the Hearing and before the objections of all the Petitioners had been heard. The deal resulted in a compromise, but it effectively requires the Port Authority to consult with the Countryside Commission for Scotland and the Nature Conservancy before reclaiming any land below high water mark, and it also prohibits the Authority from taking any steps to reclaim land within Udale Bay and certain prescribed parts of Nigg Bay. While this compromise was accepted by the four co-petitioners and others, concern must still be felt until the reclamation of certain parts of Nigg Bay has been completed and the resultant effect of the changed tidal flow on the shoreline is known.

In December 1972 the Gas Council applied to Aberdeen County Council for permission to establish a gas terminal and treatment plant on the former Crimond airfield by the Loch of Strathbeg. In order to bring in natural gas from the North Sea a pipeline would have had to be laid through the middle of the Loch. Because of the Loch's ornithological importance, the Club together with other wildlife conservation bodies lodged a protest against any development in the area. The Aberdeen Branch was extremely active in gaining support to try to persuade the County Council not to grant permission to the Gas Council, and several thousand individual signatures were collected, some from other Branches. Resulting from the many objections and individual petitions, the Gas Council withdrew its application in favour of a site at St Fergus, a few miles south of the Loch.

It is hoped that members wishing to help with the preservation of sites of ornithological importance will read again the Council's statement on the Club's policy, and in particular paragraph 7 which lists the actions that an individual can take. Members who have joined the Club since

The 1972 midwinter census of waders in Scotland

A. J. PRATER

Scotland has a large number of estuaries and coastal areas where concentrations of waders are known to occur. However, few quantitative surveys have been published. Atkinson (1972) observed Turnstones and Purple Sandpipers for a single year on the Angus coast, while Grierson (1962) described the monthly population levels for five years of six common species of waders on the Eden Estuary, Fife. Goss-Custard (1969) made detailed counts of Redshanks for three years on the Ythan Estuary, Aberdeenshire, as did Heppleston (1971) of Oystercatchers. Baxter and Rintoul (1953) and Boase (1955, 1970) described in more general terms the wader populations of Scotland, Angus and the Tay area, respectively. Recently Furness (1973) described the wader population at Musselburgh on the Firth of Forth. However, no general quantitative picture is available.

In 1969 the BTO and the RSPB initiated the Birds of Estuaries Enquiry. The aim is to obtain a complete picture of the birds of the estuaries and of as many coastal areas as possible of Britain and Ireland. The Wildfowl Trust has now become a co-sponsor of this enquiry, and the Irish Wildbird Conservancy has put much energy into its own, but closely associated, Wetlands Enquiry. The enquiry has obtained monthly counts at high water on spring tides between August and April for most areas within Britain (Prater 1972, 1973), and these have been supplemented by many counts in July and May and a few in June. These counts are continuing, and detailed information on Scottish waders will eventually become available.

This short paper presents the Scottish results of the international wader census made in January 1972. A complete count of waders was obtained on all the estuaries on the east coast of Scotland, all on the west coast north to Argyll and on the whole coastline of Fife and Angus. No counts were made in the Outer Hebrides and very few in northwest Scotland. Fig. 1 shows the areas counted and their limits. The probable omissions are discussed later. The other principal aim of the enquiry is to obtain detailed information on the distribution of birds within each area and how they use the habitats. This will enable an assessment to be made of the effect of development plans. The total wader population of each estuary or coastal area is presented in table 1.

Of course a single count in one month does not necessarily

represent the average wader population for any area. This will vary with the success of the previous breeding season, with the severity of the winter as well as with local factors such as height of tide and disturbance. However, if we judge from



Fig. 1. Areas included in wader census, January 1972.

the less complete counts made in midwinter in the two preceding years, the January 1972 count is probably representative of the normal situation. These counts show that large populations of waders winter in several Scottish estuaries on the east coast north to the Cromarty Firth, and in the Solway

Firth, Firth of Clyde and Ayr coast in the west.

The number of each species counted in January 1972 is presented in table 2. Three species, Knot, Oystercatcher and Dunlin formed about 65% of the birds counted. A brief summary of the major areas for each species is set out below.

Table 1. Areas counted in January 1972 and total numbers of waders there

	or waders tilere	
Area*		Total waders
1	North Solway, Gretna-Wigtown Bay	56134
29	Firth of Forth, Dunbar-Fife Ness	48483
5	Firth of Clyde, Gourock-Helensburgh	18150
17	Moray Firth, Burghead-Munlochy Bay	12891
15	Cromarty Firth, Udale Bay-Nigg Bay	11818
27	Eden	11262
24	Montrose Basin	10298
26	Firth of Tay, Invergowrie-Monifieth, Tentsmuir	7994
4	Ayr coast, Largs-Ballantrae	7716
25	Angus coast, Buddon Ness-Ferryden	6215
7 9 2	Isle of Bute	3583
9	Isle of Islay	2717
2	Piltanton and Luce Bay	2530
28	Fife coast, Fife Ness-St Andrews	1740
14	Dornoch Firth	1381
21	Ythan	1072
3	Loch Ryan	1047
8	Isle of Arran	883
16	Beauly Firth	874
12	Brora	859
13	Loch Fleet	765
6	Loch Ridden	544
23	Dee	229
11	Loch Linnhe, upper	173
20	Philorth	107
10	Add	78
18	Spey	78
22	Don	16
19	Deveron, upper	2
	Total	209639

*Figures refer to areas shown in fig. 1.

Oystercatcher Nine areas produced flocks of over 1000 birds. The major areas were the Solway (9036, with concentrations at Priestside, Southerness Point and Wigtown Merse), Firth of Forth (6770, particularly at Musselburgh and Aberlady Bay), inner Firth of Clyde (4183, mostly near Erskine and Rhu Point), the Eden (2500, mostly on Shelly Point) and the Cromarty Firth (2170, mostly in Nigg Bay).

Lapwing Apart from 1093 on the Firth of Forth, all other large coastal flocks were on the west coast. Principal numbers were on the Solway (9721), inner Clyde (3774) and Ayr coast (1800).

Ringed Plover Following the general pattern in Britain, there are rather few Ringed Plovers present in winter. They were scattered in small flocks of between 5 and 50 in most areas.

The only large concentrations were on the Solway (422), Ayr coast (287), Firth of Forth (259) and Isle of Bute (154). In general they were more common on coastal areas than on estuaries, and there may well be large numbers uncounted on the extensive beaches of the Hebrides.

Grey Plover All but five of the total number of Grey Plovers seen were on the Eden (70), Firth of Forth (60), Solway (23) and Tay (20). Baxter and Rintoul (1953) noted similar numbers and distribution, and Grierson (1962) noted similar numbers on the Tay and Eden during the early 1950's.

Golden Plover The distribution of Golden Plover was found to be very similar to that of Lapwing. It occurred mainly on the southwestern coasts, where 6851 were recorded on the Solway, 2150 in Luce Bay, and 1204 on the Ayr coast. It must be emphasised that counts of Lapwing and Golden Plover are not complete since a large percentage of the population remains inland.

Turnstone Scotland's estuaries support a large population of Turnstones, and they are also to be found on almost all other coastal areas. The number recorded in these counts is far less than the complete Scottish population. The counts in Fife (667), Angus (663) and Ayr (642) show how abundant this bird is on some coasts, though it is undoubtedly much less concentrated on the coastline of the northwest. Other major numbers were 881 on the Firth of Forth, 310 on the Solway and 269 on the inner Clyde, where many are mussel-bed feeders.

Curlew Rather few Curlews were recorded. Apart from the large concentration of 3274 on the Solway, the only area that supported more than 1000 was the Isle of Bute (1285). Islay, the Firth of Forth, inner Clyde, the Cromarty Firth and the Ayr coast each supported between 500 and 1000. Large numbers winter inland in several areas, but they are not included in these counts.

Black-tailed Godwit The only flock of Black-tailed Godwits recorded was 80 at Guardbridge on the Eden estuary. Two other individuals were present on the Firth of Forth. As about 80 have been regularly recorded through the last three winters, this is probably the average wintering population. Baxter and Rintoul (1953) note that there have been birds wintering there since about 1936 and that up to 1949 the maximum number there was about 30, though there were usually fewer than ten. Grierson (1962) recorded an average wintering population of about 35 between 1949 and 1955. There has therefore clearly been an increase in the wintering population of this species in recent years.

Bar-tailed Godwit Although Bar-tailed Godwits were found on only half of the estuaries visited in January, they were often present in large numbers. Most occurred in the Firth of Forth (2147, mostly in Aberlady Bay), the Eden (1502, mostly on Shelly Point), the Moray Firth (1275, mostly on Whiteness Point), the Firth of Tay (1125, mostly on Tentsmuir Point) and the Cromarty Firth (761 mostly between Dalmore and Nigg Bay). The previous January count on the Eden, 2000 in 1971, indicates that the numbers of this species have increased here from the average of 500 reported by Grierson (1962). The fairly large number (307) seen on Islay is also of interest. The fact that none were seen on the Dornoch Firth, where there were 20 in January 1970, 100 in January 1971 and 750 in January 1973, indicates that there are now lower numbers and a greater degree of variability there than Baxter and Rintoul (1953) considered usual. Only 97 were seen on the Solway, but this may be partly due to short-term movements across to the Cumberland coast.

Redshank Six estuaries had over 1000 Redshanks. They were the inner Clyde (6360, particularly the Erskine/Woodhall region), the Solway (2783), the Eden (1950, mainly at Guardbridge), the Moray Firth (1486, mostly in Findhorn Bay), the Cromarty Firth (1200, mostly around the Conon islands) and the Firth of Forth (1194). It is of note that Baxter and Rintoul (1953) made no mention at all of the most important coastal area for Redshank in the Firth of Clyde. Grierson (1962) recorded similar numbers on the Eden.

Greenshank Single Greenshanks were recorded on the Ayr coast at Doon and at Monifieth on the Tay. Larger numbers were on the Solway (13), inner Clyde (9), Fife coast (6) and Islay (5).

Knot The Knot is the most numerous wader on Scottish estuaries in winter. As with Bar-tailed Godwit, large numbers occur on only a few major estuaries. Most were found on the Firth of Forth (23746, particularly on Skinflats) and on the Solway (14673, most between Southerness and Carsethorn and at Priestside). Other important flocks were at the Montrose Basin (8000), in the Moray Firth (6250, almost all on Whiteness Head), the Cromarty Firth (4750, mostly between Alness and Nigg Bay), on the Angus coast (2729), the Eden (2000) and the Tay (1506). If we consider past records, it seems that Knots are slightly more numerous on the Montrose Basin than they were (Boase 1970), noticeably less common on the Eden (Grierson 1962) and very much less common on the Dornoch Firth (Baxter and Rintoul 1953).

Purple Sandpiper Little is known about Purple Sandpiper distribution in Scotland, though counts in recent years (Atkinson 1972) are throwing more light on it. Its distribution on rocky

coasts makes it a species for which a complete estimate is impossible. However, the concentrations noted in January 1972 were: Angus coast (326), Firth of Forth (236), Dee (113), Fife coast (97), Ayr coast (84), Solway (42) and Brora (30).

Dunlin Our counts confirm the statement by Baxter and Rintoul (1953) that Dunlins are less common north of a line between the Tay and the Clyde. The main numbers were in the Firth of Forth (11021, particularly at Skinflats, Musselburgh, Aberlady Bay and Cramond) and on the Solway (8801, mainly between Southerness and Carsethorne and at Priestside). Other large flocks were on the inner Clyde (3349), the Eden (3000) and the Tay (2326). In the north only 1805 were recorded in the Cromarty Firth and 1380 in the Moray Firth.

Sanderling Very few Sanderlings were recorded. Almost all (232) were on the Tay, particularly around Monifieth. Surprisingly there were only seven seen in all the areas counted on the west coast, and these were all on Islay. Baxter and Rintoul (1953) noted that Sanderlings occur regularly in winter in the Outer Hebrides, and so it is possible that ours is a considerable underestimate of their population level. Nevertheless it seems clear that the Scottish wintering population is small.

Table 2. Species totals, coastal wader census in Scotland, January 1972

Oystercatcher	•	36062*
Lapwing		18632†
Ringed Plove	r	1613
Grey Plover	_	178
Golden Plover	ı	11161+
Turnstone		4252
Snipe		138†
Jack Snipe		1
Curlew		10192*
Black-tailed C	Fodwit	82
Bar-tailed Go		7314
Green Sandpi	per	2
Redshank	•	19428*
Greenshank		35
Knot		64572
Dunlin		34726
Purple Sandp	iper	9741
Sanderling		269
Ruff		8
	Total	209639
	- 5001	

[†]Many more present inland *a few more present inland

Discussion

Although the figures presented here give an indication of the relative importance of each area, they do not tell the

Imany more present on rocky coasts

whole story, as many more waders may occur during the spring and autumn passage periods. Indeed Andrew (1959) for the Oystercatcher and Evans (1968) more generally for the Firth of Forth clearly demonstrated that large-scale migration takes place through some Scottish estuaries. However, the midwinter counts are made at a time when there is little migration and when the populations present are probably relatively static; they are, therefore, probably comparable.

The Wader Research Group of the International Waterfowl Research Bureau (IWRB) organises international midwinter counts of waders on the coasts of Europe, and in table 3 the Scottish population is compared with these figures (Prater, unpublished), and with the British counts. Species that occur in very small numbers or for which no satisfactory total census exists are not included in table 3.

Table 3. Percentages of recorded British and European waders found on Scottish estuaries and coasts

Species	% of British	% of European
Oystercatcher	22.5	6.8
Ringed Plover	20.0	3.2
Grey Plover	3.0	0.5
Turnstone	28.7	17.2
Curlew	20.4	7.0
Bar-tailed Godwit	20.9	8.6
Redshank	30.0	15.0
Knot	18.5	11.6
Dunlin	8.3	3.4
Sanderling	4.5	1.9

From these figures it is clear that Scotland is internationally important for most wader species, but particularly for Turnstone, Redshank, Knot and Bar-tailed Godwit, though Turnstone is under-recorded throughout its range.

The IWRB has defined an estuary that supports 1% or more of the European population of any species as being of international importance. Many Scottish estuaries are, therefore, of international importance in their own right. On this midwinter census alone, the Solway exceeded the 1% level for Oystercatcher, Knot, Redshank and Curlew; the Firth of Forth for Oystercatcher, Knot, Bar-tailed Godwit and Dunlin; the Moray Firth for Knot, Bar-tailed Godwit and Redshank; the Eden for Bar-tailed Godwit and Redshank; the Eden for Bar-tailed Godwit and Redshank; the Firth of Tay for Bar-tailed Godwit and the Montrose Basin for Knot.

With so many important areas around the Scottish coast, the concern felt about industrial development and especially the shore-based developments of the oil industry, is clearly justified. The sites apparently chosen for development sound like a roll-call of some of the more important sites for waders on the east coast: Cramond and Grangemouth (Firth of Forth), Whiteness Point (Moray Firth) and Nigg Bay (Cromarty Firth). As the counts of the Birds of Estuaries Enquiry continue, it becomes more and more clear that Scotland's estuaries play important roles in the life cycles of many waders—as they are already known to do for many species of ducks, geese and swans. The ecologically fragile and limited inter-tidal area is one that can all too easily be destroyed, and it is therefore in obvious need of vigorous and continuing defence if we are not to lose the birds that depend on it.

Summary

This paper presents the results of the January 1972 wader census of Scotland's estuaries. Some 209600 waders were counted. The most important areas were the Solway Firth (56000) and the Firth of Forth (48000), and the most numerous species were Knot (64000), Oystercatcher (36000) and Dunlin (34000). The considerable international importance of Scotland for waders is briefly discussed.

Acknowledgments

I would like to thank all the many Scottish birdwatchers who have taken part in the Birds of Estuaries Enquiry and without whose efforts little would be known. In particular I would like to thank N. Atkinson, J. Ballantyne, A. Currie, I. Gibson, I. Hopkins, A. G. Stewart, R. Summers and J. G. Young, who acted as regional organisers and ensured that coverage was excellent.

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Breeding biology of Magpies in Aberdeenshire

J. A. LOVE and R. W. SUMMERS

Introduction

North of the Forth-Clyde line the Magpie is of very local distribution (Parslow 1967), and Holyoak (1967) in his analysis of BTO nest-record cards was unable to publish any data on this species for the north of Scotland. As a contribution towards filling this gap, 22 Magpie nests were studied in Aberdeenshire in 1971 and 1972, and the results are given here.

The study area (plate 29) was about 50 square kilometres of flat agricultural land almost devoid of hedgerows, between Newburgh and Cruden Bay. Many of the farms have small clumps of trees around them, and these are the main nesting sites for Magpies, holding 80% of the nests found. The system of roads through the area together with the conspicuousness of the large, domed nests, which are built before the trees come into leaf, facilitated the finding of nests sites in early spring. Subsequent visits were made only to determine whether nests were occupied and to note clutch and brood size.

Nest site

Nest-building took place towards the end of March, a new nest being built each year, always close to the old site but in only one case in the same tree. Sycamores were commonly used but beech, hawthorn and blackthorn were also recorded. Nests were built between two and eight metres above the ground, with an average of 4.5 metres.

Most of the nests were typical bulky structures of sticks lined with mud and fine roots and covered with a loose dome of twigs. Goodwin (1956) and Holyoak (1967) suggested that the presence of a dome probably reduces predation of the eggs by crows etc. Two nests were undomed; one of these produced four young, and the other, at a new site, (probably a pair breeding for the first time) lost its clutch before laying was completed.

Laying date

Nests were not visited frequently enough to determine the date of laying of the first egg, but this could be calculated by one of two methods. When a clutch was found still incomplete an interval of two days was allowed between the first and second eggs and one day only between subsequent eggs (Holyoak 1967). In the second method, the age of the heaviest chick was calculated from its weight; this was obtained during the first week after hatching, and the approximate date of laying was calculated by adding 21 days for the incubation period (Holyoak 1967). Where it was possible to use both methods on the same nest the calculated dates agreed to within one or two days. Laying dates were thus obtained for 13 nests and ranged from 18th April to 3rd May. The mean date of onset of laying was 27th April.

Nest success

Of the 22 nests found, seven failed completely, all but one during laying or early incubation. The causes of failure were not known, except at one site where the nest was shot down each year. Nest-robbing by boys was suspected at two nests. Of 15 completed clutches, the mean size was 6.7 eggs (standard deviation \pm 1.2), and the range from five to eight eggs (table 1). Only one pair raised a full brood; the adults were suspected of taking eggs from a nearby chicken run, and the nest was shot down by the farmer when the young were almost fledged, but for the purpose of analysing brood size this was treated as a successful nest. The following year the nest was

Table 1. Frequency of clutch and brood sizes

No. of eggs or chicks	1 2	3	4	5	6	7	8	Total nests
							5 1	15 11

destroyed during laying. In the remaining 14 broods productivity was reduced by the presence of infertile eggs or by the death of very young chicks. It was not possible to measure hatching success accurately, because dead chicks were usually quickly removed by the parents. No natural deaths were recorded, however, after the young were about ten days old, and so nesting success was measured as the percentage of eggs laid in completed clutches that produced young to this age and thus, effectively, to fledging. Eleven broods were available for this analysis, and the 71 eggs laid produced 46 chicks (65%); the mean brood size at fledging was 4.2 ± 2.1 chicks. When all 22 nests in the study area were included, however, only 2.1 young were fledged per pair

Chick growth

Two nests were chosen for a detailed study of chick weights. Nest A had a clutch of seven eggs; at least five of these hatched, and the chicks were weighed at intervals of a few days until the oldest was 24 days. Until they were old enough to

be ringed, the chicks were individually identified by marking their toes with cellulose paint. By this time there was a difference of only 14 grams between the oldest chick and the youngest, although the second chick was the heaviest, and the third the lightest. Two infertile eggs remained in the nest for about three days after the youngest chick had hatched before being removed by the adults.

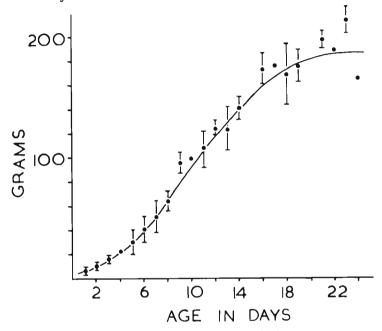


Fig. 1. Growth rate of Magpie chicks.

Nest B originally contained a clutch of eight, but by 11th May there were four chicks and three eggs only. The next day a fifth chick (6.5 grams) was dead in the nest, and only one egg remained. On 15th May the dead chick had gone, and the last egg was removed two days after that. By the time the first chick was 19 days old it weighed 185.5 grams, the second 166.5 grams, the third 173.5 grams, and the fourth, which had always been very much lighter than the rest, only 130.5 grams. After 24 days the brood 'exploded' when we approached the nest, but the second chick was caught and was found to weigh 167 grams.

Since incubation began before the clutch was completed, the young hatched asynchronously. The weights of the nine chicks were therefore arranged according to their age in days, and the average and standard deviation are plotted in fig. 1. This has been used to calculate the age of chicks in other nests and hence approximate laying dates. For the first week the mean weights are fairly constant, and it is at this time that the chicks can be most accurately aged.

Eight newly laid eggs (the first four from two separate clutches) averages 10.6 grams, and on its first day a chick weighed 7.7 grams (sd \pm 0.74 grams). Just before fledging the weight of the chicks was about the normal adult weight of around 200 grams.

Discussion

Magpies were the least common of the four species of corvid breeding in the study area, occurring at a density of about one nest per 4.5 square kilometres. Dr Y. Yom-tov (pers. comm.) found a density of one Carrion/Hooded Crow nest per 2.1 square kilometres within the same area. Rooks occurred at a density of one nest per 0.04 square kilometre in the whole of the Ythan valley (Dunnet and Patterson 1968), which includes our study area. There are no comparative data for Jackdaws, but casual observations indicated that they were more numerous than Magpies.

Lockie (1955) and Holyoak (1967 and 1968) showed considerable overlap in the diet and the breeding times of Magpie and Carrion Crow, and so one might not expect the two species to occur together. Indeed in the majority of cases Carrion Crows did not breed near Magpie nest sites. In only five instances (where larger clumps of trees occurred) did both species attempt to nest in close proximity, but in none of these did both succeed in hatching eggs, the Carrion Crows being successful in three cases and the Magpies in two.

In addition, two old Magpie nests from previous years were found near occupied crow nests. This would indicate that some mutual exclusion may have been taking place, perhaps through the medium of nest-robbing of one species by the other.

Although only 22 nests were found and even fewer yielded data on the different aspects of breeding, some comparisons with the results published by Holyoak (1967) are ventured here. The mean date of onset of laying in Aberdeenshire was 27th April, compared with 21st April in the south of Scotland. The mean clutch size was higher (6.7 eggs compared with 5.7 for southern Scotland). These differences are probably correlated with latitude (Lack 1947), although clutch sizes for other areas in Britain given by Holyoak showed regional rather than latitudinal variation.

Acknowledgments

We should like to thank Dr Y. Yom-tov and I. Taylor for helpful criticism of the manuscript, which was kindly typed by Miss J. Dunnet.

Summary

In an area of 50 square kilometres in Aberdeenshire, 22 Magpie nests were located in two years (a density of one nest per 4.5 square kilometres). The mean date of laying of the first egg (27th April) was about a week later than in southern Scotland, and the mean clutch size (6.7 eggs) was greater. One-third of the nests failed completely; 65% of the eggs laid as complete clutches produced fledged young. The mean brood size at fledging was 4.2 young; but the overall breeding output for the study area was only 2.1 young per pair. Data are given on the growth of nine chicks from two nests. There was an indication that when Magpies and Carrion Crows attempted to nest close together one species failed early in the egg stage.

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Short Notes

Fulmars in a rookery

On 16th May 1973 while I was staying in Golspie, Sutherland, my attention was drawn by my hostess, Mrs Sinclair, to the attempted use by a pair of Fulmars of a nest in a rookery just across the road from her house. The Fulmars were no longer occupying the nest, which had been partly destroyed in recent high winds, but were seen several times flying close past the rookery. There were half a dozen pairs of Rooks feeding young in the colony, which is in a small wood on the main road where it enters Golspie High Street.

Mrs Sinclair had watched the Fulmars from her windows over a period; they had taken over the completed nest in April and occupied it for about three weeks, engaging regularly in the cackling displays commonly seen on more normal nest sites. She had noticed no interference from the Rooks, though there were two nests only yards away in the next tree.

There are large Fulmar colonies within five miles on inland cliffs both north and south of the Mound at the head of Loch Fleet. Fulmars are frequently seen in flight over the whole area and even occasionally sitting on rooftops in Golspie. There are, however, few suitable breeding sites nearby, since the coastline consists of sand dunes and pebble beaches to the south and well wooded slopes by Dunrobin Castle to the north.

C. K. MYLNE.

(I. D. Pennie recorded (Brit. Birds 60: 90) similar behaviour of Fulmars, also at Golspie, in 1966.—Ed.)

Long-tailed Ducks in the Uists

On calm winter days Long-tailed Ducks are often seen close inshore on the sandy western coasts of the Outer Hebrides. Sometimes flocks dive in the breaking waves within a few yards of the sea's edge, with no other Long-tails to be seen as far out as birds can be identified. On rough days Long-tails are seen far out to sea. They may also occur far out on fine days, particularly near a long reef that runs north to south about two kilometres west of the Uists. However, the occurrence of ducks close inshore on calm days suggested that it might be possible by counting only on these days to get an approximate first idea of their numbers and of the importance of Hebridean waters for their conservation. We made counts once each month in winters 1971/72 and 1972/73, using a motor car and driving to strategic points on the machair. Each count took about two or three days, occasionally longer owing to interruptions from bad weather.

The data obtained do not necessarily present the full picture, however. First, the birds were not consistently seen in the same places and obviously moved along the coast as well as out to sea. Secondly, no counts were done on the east coast, where access is difficult. Thirdly, other birds could have been along the reef, with only part of the population inshore. However, there are few figures for the numbers of Long-tails in the Outer Islands, and the totals in the table are reasonably consistent.

consistent.

If we exclude the count in February 1973, which is lower than the others, all the totals are between 150 and 300, and most between 150 and 250. This gives the order of magnitude, and there was not much difference between the two years.

J. W. Campbell in Wildfowl in Great Britain (Atkinson-Willes 1963) suggests that Long-tailed Ducks are plentiful in the Sound of Harris, but if this is so they are not visible from North Uist except near Vallay. He also states that Long-tails are scarcer in South Uist than further north. However the only

figure given is for a spring peak of at least 140 in Loch Branahuie near Stornoway. Fishermen have told us of a large num-

Counts of Long-tailed Ducks off the west coast of the Uists and Benbecula in winters 1971/72 and 1972/73

	Oct	Nov	Dec	Jan	Feb	Mar	Apr
North Uist Benbecula South Uist	no counts no counts no counts	58 12 119	111 8 164	90 16 139	55 6 183	68 9 107	no counts no counts no counts
1972/73		189	283	245	244	184	
North Uist Benbecula South Uist	48 22 89	48 31 128	47 22 111	57 19 88	22 0 82	19 0 158	38 0 192
	159	207	180	164	104	177	230

ber in the Sound of Harris in late April. Both these flocks may be gatherings from a wide area. Contrary to Dr Campbell's suggestion, more birds were seen off South Uist than off Benbecula or North Uist, but this is partly because of the longer coastline. In 1970/71 the best places for Long-tails in North Uist were usually the north coast near Vallay, and in South Uist around Ardivachar Point, from Varran Island to Dremisdale, near Rubha Ardvule, and near Pollachar. In 1972/73 the birds were more scattered, but most were usually seen between Rubha Ardvule and Grogarry in South Uist.

Since the length of the west coast in the Uists is over 150 kilometres, the numbers of Longtails seen are not high, and if we include the spring flock near Stornoway the total for all the Outer Hebrides may be of the order of only a few hundreds. Thus these islands are probably not important in the conservation of Long-tailed Ducks. However, no comparable data are available for Lewis, Harris and Barra, nor for the reef nor the east coasts, and more counts from these places would be worthwhile. A useful exercise would be a trial count on east and west coasts of all the islands in mid April.

C. Brown, D. Jenkins.

Unusual nest sites of Oystercatchers

In Ayrshire, a pair of Oystercatchers nested in a weathered hollow in the top of a wooden fence post each year from 1968 to 1972. Young were reared each year until 1972, when boys took the eggs. The birds did not use the site in 1973.

Another hazard of this unusual site was illustrated on one occasion, when a cow selected this particular post to relieve

an itch. Its scraping aroused the incubating bird, which flew off the nest. Alighting on the animal's rump, the Oystercatcher ran along its back and finally perched between its horns, all the while calling vigorously.

W. S. PATON.

In 1971, 1972 and 1973, Oystercatchers nested on the roofs of two buildings in Aberdeen—at the Nursing College (two storeys) and the College of Education (three storeys). At both sites there are fairly extensive lawns, where the adults were seen to feed. The roofs are flat, with a covering of small, loose stone chips on bitumen, and the birds were able to make shallow nest scrapes. Young were successfully reared at both sites in all years, though at one site in 1972 one of the two young, hatched from a clutch of three eggs, was lost when it was blown off the roof in high winds.

D. P. WILLIS.

Rooks in Shetland

In our book *The Birds and Mammals of Shetland* (1955) we record the establishment of the first and only rookery in Shetland. This was in the plantation of Lindsay Lee on the Kergord Estate, Weisdale, and consisted of nine nests in 1952 increasing to 11 the following year.

In July 1973 we revisited the estate and again counted the Rooks' nests in Lindsay Lee. We found that they had increased to about 176 in spite of severe winter conditions and numbers being shot each year on nearby crofts, where they are reputed to do considerable damage to crops of oats and potatoes.

A novel form of control results from the Guizer Jarl's squad shooting some each winter for the sake of the wings with which to adorn their helmets for Up Helly Aa instead of the traditional Ravens' wings.

L. S. V. VENABLES.

Fieldfares breeding on the Scottish mainland, 1972-73

The following records of Fieldfares nesting on the mainland were reported in 1972:

- 1. A. G. Payne discovered a pair of Fieldfares with at least two recently fledged young on 29th July in Banffshire. Although he was unable to find the nest, it was probably in or by the hill birch scrub near which the young were being fed.
- 2. On 13th June in central Aberdeenshire M. A. Macdonald and R. L. Swann were shown a nest from which Fieldfares had been disturbed a week earlier. It was under a grass tussock

on the bank of a ditch that ran beside a small patch of willow scrub. The nest was deserted before completion, but a pair of Fieldfares remained in the same general area during the summer.

- 3. On 15th May in Donside, Aberdeenshire, D. B. Leslie located a pair of Fieldfares, which became very agitated when he approached a Scots pine. The tree was in a narrow belt of widely spaced pine mixed with birch and larch near a river. The ground vegetation was grass, which was grazed by sheep. Although he did not stay to search for a nest, he had little doubt from the birds' behaviour that they were nesting in the pine. Independently, J. R. D. Murray saw and heard a Fieldfare in flight in the same area on 9th June.
- 4. On 8th May in Strathardle, Perthshire, J. J. M. Flegg watched a single Fieldfare, at a few yards' range, gather a beakful of worms and another shorter and greyer soil invertebrate. The bird then flew out of sight towards a dense plantation of young conifers 6-10 feet high. Blackbirds and Song Thrushes were nesting in the plantation, but the Fieldfare was not seen again during an hour's observation. To prevent unnecessary disturbance, he did not search the plantation, and there was no opportunity to return at a later date.
- 5. I. McLachlan reported a pair of Fieldfares apparently holding territory in early summer near Dunkeld, Perthshire (R. H. Dennis, pers. comm.).
- 6. I received a convincing report from D. Nicol (a game-keeper and well aware of the difference between Fieldfare and Mistle Thrush) of a successful nest in lower Deeside (North Kincardineshire). The nest was in a pine at the edge of a small, mature plantation bordering arable land. As in other reports, the adults were very agitated when the observer approached the nest.

In 1973, at a site five miles from that in report 6 above, I saw a newly-fledged young Fieldfare, still with some down on one side of its head. It flew across the hill track along which I was driving and landed very uncertainly on a branch of a mature larch in a one-acre isolated stand. I was able to walk to within a few yards of the bird but, despite a thorough search, could find no sign of any other young or of the adults. Although I passed the place several times a week for at least a month both before and after my sighting, I had no other indication that Fieldfares were present.

No further breeding records for 1973 were known at the time of going to press, although there were several reports of single birds during the summer (as in previous years).

There has apparently been little indication so far of birds returning to the same places in following years to breed, which

may suggest that British nesters are late passage birds remaining in suitable localities. If this is so, their success may have been helped by the wide range of habitats in which they are able to nest. In addition to those mentioned above, breeding records previously published in Scottish Birds show a variety of nest sites: oak (6: 212), elder (5: 31), sycamore (6: 110), fir (pine?) (6:110) and two ground nests, one in the bank of a stream (5: 218) and the other in heather in the side of a ditch (6: 110). These are similar to the range given by Jourdain in the Handbook, i.e. birch, pine, alder, fir and occasionally in gardens, wood stacks, rocks, huts and the ground.

The first known breeding record for Britain was in Orkney in 1967 (E. Balfour, Scot. Birds 5: 31), and the first known mainland breeding record was in East Inverness-shire in 1970 (D. N. Weir, Scot. Birds 6: 212). Although there have been subsequent breeding records in Orkney and Shetland, there have been no further published reports of breeding on the Scottish mainland. I am therefore grateful to Dr J. T. R. Sharrock (pers. comm.) for the comment that there have been several breeding records; indeed, he considers that the species is now firmly established in Britain. One reason for writing this note is to draw attention to this fact in the hope that more observers may feel they can now give at least some details of summer sightings or breeding records to local recorders so that a better understanding may eventually be gained of the spread of this recent addition to our breeding avifauna.

I am most grateful to J. J. M. Flegg, D. B. Leslie, M. A. Macdonald, J. R. D. Murray, D. Nicol, A. G. Payne and R. L. Swann for providing me with their field notes. All readily agreed to

let me combine their observations with my own.

N. PICOZZI.

Golden Eagles rear three young

It is not often that a pair of Golden Eagles on the west side of Scotland rears two young, and a pair that successfully rears three young is exceptional. An eyrie that we had under observation in South Argyll in 1973 was found to contain three young, and by early July all three had left the nest and were flying.

Clut ches of three eggs have been recorded several times in Scotland, but successful fledging of three young appears to have been recorded at only one site previously, although the pair of birds in that case was reputed to have reared 24 young in eight years. (Seton Gordon, *The Golden Eagle*).

The South Argyll birds have been successful each year since the eyrie was first located in 1969, the number of young reared now totalling nine in the five years. It is of interest that the same eyrie has been used each year.



PLATE 29. Breeding biology of Magpies in Aberdeenshire; aerial view of part of the study area north of Newburgh. The arrows indicate nest sites. Note the absence of trees except around farm buildings.

Photograph by courtesy of the Geography Department.

Entersity of Glasgow

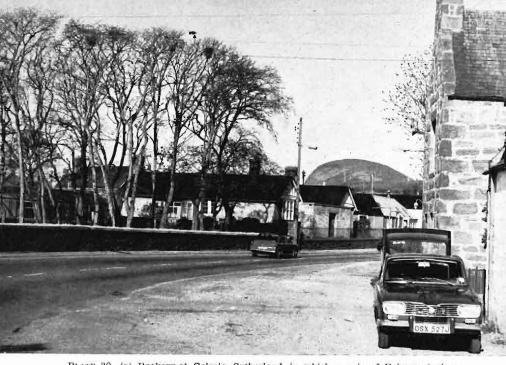


PLATE 30. (a) Rookery at Golspie, Sutherland, in which a pair of Fulmars took up residence in spring 1975 (see p. 403).

Photograph by C. K. Mylne

(b) Long-tailed Duck in winter plumage (see p. 404).

Photograph by N. Picozzi

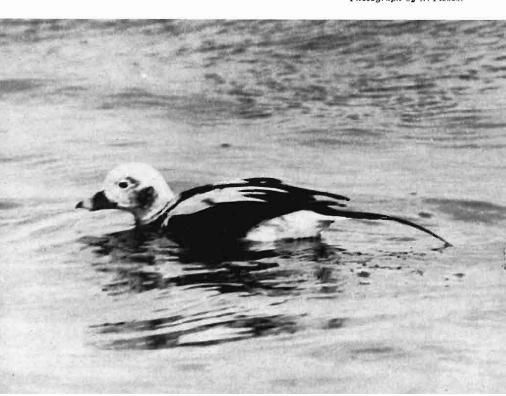




Plate 51. Oystercatcher nesting on top of a fence post (see p. 405).

Photographs by W. S. Paton





Plate 52. Three well grown eaglets in an eyrie in South Argyll, 1975 (see p. 408). $Photograph\ by\ Dr\ E.\ C.\ Fellows$

Factors that might have contributed to this successful breeding record include a low-altitude, sheltered nesting crag; a plentiful food supply, rabbits being the main prey; and a lack of human disturbance. The site is not known to the landowner nor his employees, and visits by observers have been minimal, all observations at the eyrie having been carried out from a distance by telescope until the young birds were half-grown.

A. G. GORDON, M. J. P. GREGORY.

(Although the rearing of three young by Golden Eagles is not uncommon in the United States, it is rare in Britain.—Ed.)

Reviews

Finches. By Ian Newton. London, Collins, 1972. Pp. 288; four colour, 24 monochrome plates; 64 text figures. 22 x 15 cm. £3.00.

It will come as no surprise to anyone who heard Ian Newton's paper on birds of prey in Scotland at the 1971 SOC Conference that Finches is undoubtedly one of the best bird books to appear in recent years. This is the latest of the New Naturalist volumes and can certainly be placed among the small number of outstanding works of the main series that have become classics of natural history.

Ian Newton's main fields of research, both academic and economic, (including his Oxford D.Phil, thesis) have been concerned with finch biology, and a great deal of the text of this book stems directly from his own research and from observations already published in various scientific journals. This is now made more readily available not only for the general reader but for the serious ornithologist who lacks either the time or the facilities to read the original papers. It goes without saying, however, that the author has also made full use of his extensive knowledge of the literature already published on this subject.

His subjects are the European finches. The Citril Finch, which gets two pages of text and a full-page photograph, achieves its status as a British bird on the strength of a single specimen taken 70 years ago, whereas the Trumpeter Bullfinch gets one short paragraph, though unfortunately the two recent British records turned up too late for inclusion, and we have no indication here (or anywhere else that I can find) whether this is a species that may be extending its range. Interest would have been broadened if the Fringillinae had included some account of the Canarian Blue Chaffinch and those fascinating races of the common Chaffinch from North Africa, the Canary Islands and Madeira.

Ian Newton's first love was the Bullfinch, and one of his chapters embodies a description of methods of control of this horticultural pest deduced from studies in food ecology. This example demonstrates clearly how necessary it is for control measures of any pest species to be preceded by an adequate research programme.

How many of us think of Crossbills as cardueline finches? Throughout the book there is consideration of species relationship on grounds other than straight taxonomics, but in dealing with the Crossbills it seems that the author is on less familiar ground. The food ecology of the three species is explained, beak size being correlated with preferred food—Parrot Crossbill is associated with pine, Crossbill with spruce and Twobarred Crossbill with larch. Nevertheless scotica is retained as a race of Crossbill (although its preferred food is pine) without consideration of

differences, for example, in song and behaviour. Indeed I can find no mention at all of the Crossbill's wild and beautiful song. The description of the call-note of Parrot Crossbill is at variance with the opinion expressed by Svein Haftorn (Norges Fugler, p. 784)—who ought to know, but there is obviously much room for further study.

The editors apologise for the necessity, presumably for reasons of cost, of discontinuing the use of the colour photographs that were a feature of earlier volumes, but the fine paintings by Hermann Heinzel go a long way to compensate for this, and the author and publishers are to be congratulated on the high standard of this addition to their most valuable series. This is a superb book by a most versatile author.

IAN D. PENNIE.

The Dotterel. By Desmond Nethersole-Thompson. London, Collins. 1973. Pp. 288; colour frontispiece, 8 black-and-white plates, 14 text figures, 24 tables. 21½ x 14½ cm. £3.50.

The Dotterel is an uncommon bird in Britain, and its haunts are more often than not inhospitable to those who seek it. Consequently any study of the Dotterel requires not only an interest in the bird but also the tenacity to withstand less than optimum study conditions. Desmond Nethersole-Thompson has lived on mountain tops with the Dotterel, and his amassed notes on the bird in its summer home are drawn together and published in this monograph.

A vast personal experience of the bird forms the basis of the book, but as much information again has been gleaned from discussion with other Dotterel enthusiasts and from an exhaustive search of the literature. The author did most of his field work in the Grampians, but his notes on the arrival, courtship, nesting and rearing of young are supplemented by comparison with those of other observers in Britain and abroad. The author is specially interested in the bird's adaptation to its continually fluctuating environment, and many topics are interrupted with discussion of the 'survival value' of any particular character under the extremes of sun and snow. Appropriately, a significant part of the text is devoted to a description of the Dotterel's environment, including the elevation, topography, weather, flora and fauna of the Scottish plateaux, again with comparative notes from elsewhere. There are also chapters on distribution and movements, populations, dispersion and the history of human influence on the Dotterel.

The book is a reflection of the author—true naturalist, tenacious yet jovial; the old naturalists were his inspiration, for they possessed enthusiasm for the pursuit of natural history long before the advent of ecology. It was this kind of enthusiasm that gave Nethersole-Thompson the courage to cut free from security and seek the Dotterel on the hills. At that time there was no financial aid, and naturalists were either men of independent means or they had to rough it. Nethersole-Thompson had no sponsor, no vehicle, no library, and his field equipment comprised essentially boots, binoculars and notebook, with a canvas rag for shelter. His best Dotterel year was 1934, and much of his field work was done then and between 1946 and 1952. His notes record events that happened 39 years ago, yet since then no one else has even equalled the work. It was an achievement in itself to have accumulated the information and even more so to have written the book after such a time lapse.

Nethersole-Thompson had no scientific training, and it was not until much later than he had scientific advice. His field notes were written in an atmosphere of intense interest, but without knowledge of recording in a standard fashion to facilitate analysis. Some observations are, by their nature, more standard than others. Clutch size from different years and localities can be compared directly, whereas laying dates are com-

parable only if the amount of effort put into every year and locality has been measured. Descriptions of behaviour are so much more complicated that the author has presented these in groups of anecdotes. It would appear that behaviour was recorded on the spot as interpreted incidents, and these were later grouped under these interpretations. The resulting mass of small events gives no idea of the frequency of different behaviour nor an objective view of postures and actions free of the observer's original interpretation. In several places outline sketches could have enhanced or even replaced written description. As it is, the reader is left with little conception of generalised Dotterel behaviour.

A great deal of effort has been taken to include all available information to date, but this is not necessarily always to the reader's advantage. Owing to the miscellaneous nature of the material, it is at times impossible for the author to summarise, so that note follows note, the theme is obscured, and reading becomes tedious.

Nevertheless, the book as a whole is exciting. The author recreates the experience of hill and bird, the thrill of a first encounter with the Dotterel, the exhilaration of being with wild birds in wild terrain. His stories of hunters, eggers and nesters are so vividly narrated that they reveal the passion that motivated these pioneers as well as the method of their success or failure. In this respect, chapters 2 and 3 are perhaps the most entertaining, for intermingled with these tales is shrewd comment on the character of the early Dotterel seekers and their minions, with the occasional jibe at some of their more respectable contemporaries.

As in The Snow Bunting, the authority of D. A. Ratcliffe has been enlisted to describe the bird's habitat in Britain and its breeding on English fells. A section by Adam Watson and Raymond Parr relates, in simple, logical steps, the aims, results and conclusions of their analysis of the author's data on timing of the breeding season of Dotterel and Ptarmigan. Amid the rambling style of the chapter, this analysis is so starkly scientific that it may be felt that it should have appeared as an appendix. However, the contrast merely emphasises two different approaches and shows how they may complement one another. Statistical data are necessary if we are to learn enough about the Dotterel to afford it sufficient habitat for its continued presence in Britain. However, there is little use in this knowledge unless people consider the conservation of the bird worthwhile. Here both scientist and naturalist have their parts to play. The book provides fact and informed opinion about the Dotterel, and at the same time conveys the special fascination of this mountain wader that has lured so many people into high country.

Though the book is a welcome contribution to the ornithological literature, it is unfortunate that it will undoubtedly engender greater interest in the bird. This summer has already seen unprecedented numbers of people on the hills and unwarranted disturbance by a ringer over a part of the bird's range. It is questionable whether any knowledge likely to be gained from this marking technique will outweigh the deleterious effects of ringing chicks and the disturbance in attempts to read the ring number of any ringed bird that may return. Two chapters of the book tell of persecution in the past: it seems the Dotterel has survived the "acquisitive society" only to be confronted by less hardy, but equally zealous 'twitchers', photographers and ringers. The book contains no indication of the response of the Dotterel population to this type of disturbance; the author fears the commercial development of the high ground rather than this new breed of naturalist. It is becoming obvious that not all who have read the book have paid heed to Ratcliffe's counselling (p. 197) "..., but all of us who wish the Dotterel well must give a thought to the disturbance we ourselves may create."

Birdwatchers' Year. By Leo Batten, Jim Flegg, Jeremy Sorensen, Mike Wareing, Donald Watson and Malcolm Wright. Berkhamsted, T. and A. D. Poyser, 1973. Pp. 351; 19 black-and-white photographs; numerous line drawings. 24 x 16 cm. £4.60.

A most informative and enjoyable book by six authors, who describe, month by month, the birdwatching events of a year in their own individual localities. Leo Batten, Research Officer at the BTO, deals with the Brent Reservoir in London; Jim Flegg, Director of the BTO, describes what goes on at Northward Hill, a woodland in the Thames basin; Jeremy Sorensen, RSPB Warden at the Ouse Washes, gives an account of this 20-mile stretch of wetlands in Cambridgeshire; Mike Wareing, a farmer, tells about The Breck, his farm in Derbyshire surrounded by industry, coal-mining and chemical production; our own Donald Watson, bird artist and past President of the Club, writes about his home mountains and moorlands in southwest Scotland; and finally Malcolm Wright, Warden of the Calf of Man Bird Observatory, details the events on that island. What a pity a seventh section could not have been added describing a coastal or estuarine area. There are delightful line drawings at the head of each month's account; they are mainly by Ian Willis, but Donald Watson illustrates his own diary.

I fully endorse the publisher's claim that each author has brought an individual approach to his diary. The contributions are entertainingly diverse in style, content and viewpoint, resulting in a fascinating compilation of fact, anecdote and general observation that will appeal to birdwatchers at all levels of expertise. For each habitat the author's own observations are given on both resident and passage birds. There are accounts of moult, ringing work, weights in relation to migration, life spans, roosts and so on, and observations also touch on other aspects of natural history and wildlife, weather and seasons, conservation and ecology.

The book highlights many problems that must be resolved if we are to preserve our heritage of wildlife: the pressures on remaining open spaces in urban and industrial areas; the wholesale felling of hardwood and deciduous trees and replanting with conifers; the filling-in or drainage of wetlands and reclamation of land from the sea, where such places are essential as feeding sites or refuges for wildlife; human disturbance; intensive farming; and pollution.

GERARD L. SANDEMAN.

The Naturalist in Majorca. By James D. Parrack. Newton Abbot, David and Charles, 1973. Pp. 224; 32 black-and-white plates, 15 text figures. 22½ x 14½ cm. £3.95.

Not long ago, any keen naturalist who said he was going to Majorca for a holiday might have been considered eccentric; nowadays a totally different view prevails, and what is undoubtedly one of the most popular holiday resorts in the Mediterranean is also regarded as an island of outstanding interest to the naturalist—the botanist and entomologist as much as the ornithologist.

What has always been lacking, however, is detailed information on what might be seen there, or where the best spots are, and for the most part the birdwatcher in Majorca has had to find out for himself. Dr Parrack has made a courageous and most successful first attempt to summarise what is known about the flora and fauna of this fascinating island. His book deals in some detail with the geology, the main habitat types and the abundant and varied wildlife. The section on birds is particularly useful and contains an annotated checklist.

It would be unfair to criticise the book for its incompleteness or to stress that the checklist is open to question in parts and is based on very few authorities, considering the number of people who have been there: until some centralised recording scheme is in operation, matters could hardly be otherwise. Instead, I prefer to regard the book as a useful first step towards a fuller record and can only echo the point the author himself makes that his collation is incomplete and that the opportunities for further research into the status and distribution of much of Majorca's wildlife are almost endless.

No birdwatcher who goes to Majorca should be without this book: in spite of its price it is a most valuable work, and perhaps it is not too much to hope that it might be the forerunner of other such books on European areas.

M. J. EVERETT.

Birds—Collins Colour Guide. By Claus König, translated from German by H. Mayer-Gross. London, Collins, 1973. Vol. 1 Pp. 256, 136 colour photographs. Vol. 2 Pp. 256., 150 colour photographs. 19 x 13 cm. £1.50 each vol.

It did not occur to me in several weeks of trying to find a use for this book that I should never have read the eulogy on the dust-jacket; this describes it as a pocket-sized, authoritative guide, showing clearly visible identifying features and characteristic attitude of the birds. The pictures are, almost without exception, excellent examples of the traditional bird-photographer's art, but unfortunately they confirm yet again that the colour camera and the eye of the average birdwatcher seldom see the same picture. That the feathered denizens of our fields, woods, wild country and back gardens should invariably look much more like field-guide illustrations than like flash colour photographs taken three feet from the nest is a strange fact—but fact it is. The two volumes, therefore, are unlikely greatly to increase our bird-recognition capabilities. On the other hand, for anyone wishing to confirm, for example, that a Redpoll really does have a bright carmine patch on the top of its head, this book is a must.

"For technical reasons," says the foreword, "it was impossible to depict all the species on the same scale." That is nowhere better illustrated than in the two photographs, one above the other, showing a Herring Gull and a Great Black-backed Gull, both apparently exactly the same size, faced by a Lesser Blackback twice as big. (But the full-dress, sergeant-major-like Stone Curlew, lording it over a sub-miniature, denimclad Bonxie on the previous plate, comes a good second).

As a final identification detail, the book gives the weight of each species pictured; the two volumes themselves turn the scale at 26 oz—about the same as a brace of Partridges. I think I'd rather have the Partridges.

B. G. GRATTAGE.

Enquiries

Carrion/Hooded Crow hybrid-zone Enquiry

In September 1973 the enquiry completed its first year; useful information has been collected, and the beginnings of an interesting picture are 'emerging, and I should like to thank all those who have helped so far in providing data. However for a fuller, more accurate definition of the zone more observation will be required during the 1974 breeding season.

The areas where more data are particularly needed are: Buchan, Moray, Aberdeenshire, Perthshire, Inverness, Cairngorms, Argyll, Caithness and southwest Sutherland. However, reports of sightings of Crows, anywhere in Scotland, will be useful, along with a description of the plumage category: Hooded, light-hybrid, dark-hybrid or Carrion. Addi-

tional details will also be welcome, particularly on the sex of birds (the female incubates, and the male is more active in territorial defense and on Crow roosts). Further information and record sheets are available, along with any other details required, from: Tony Cook, Edinburgh University, Zoology Department, West Mains Road, Edinburgh.

Date of return of auks to breeding colonies A recent paper on the Fulmar (Bird Study 20: 221-225) suggests that this species now spends a greater part of the year on land than formerly. The same may be true of Guillemots, Razorbills and Puffins. Information is required on the first dates (day, month and year) of return of each species to its breeding colonies, and the size and location of these colonies. Additional information on the status of the colonies (increasing or decreasing), past records, and other observations of attendance patterns would be useful. Recorders should state whether their observations are regular or casual. All records will be gratefully received by: T. R. Birkhead, Edward Grey Institute, Department of Zoology, South Parks Road, Oxford OX1 3PS.

THE SCOTTISH ORNITHOLOGISTS' CLUB

Revenue Account for the year ended 30th June 1973

	Year to 30/6/73	Year to 30/6/72
INCOME—	,-,	,-,-
Subscriptions received for year Income Tax recovered on covenanted subscriptions Dividends and Interest received (gross) Surplus on Bookshop (sales £9234) Sale of 'Scottish Birds' Sundry sales less sundry purchases Donations received	£4388 630 217 2289 238 86 7	£4084 589 197 1899 271 113 99
	£7855	£7252
EXPENDITURE—		
Branch expenses including lectures Travel expenses of Council members and of	£482	£340
delegates to conferences	216	140
Secretarial services Office expenses	4281 911	3655 701
Scottish Centre for Ornithology and Bird Protection:	311	701
Club's share of running expenses	516	841
Cost of books purchased for Library	125	111
Cost of publishing 'Scottish Birds' (less advertising revenue £419)	1056	1087
Honorarium to Editor of 'Scottish Birds' £150 Less Contribution from 'Scottish	1000	
Birds' Appeal Fund 150		
Net cost of Annual Conference Subscriptions paid	18 57	38
	7662	6913
Excess of Income over Expenditure carried to	7002	0010
Balance Sheet	193	339
	£7855	£7252

Balance Sheet as at 30th June 1973

				Year to 30/6/73	Year to 30/6/72
Accumulated surplus as at 30th Jun Add: Excess of Income over Expen				£3905 193	£3566 339
Accumulated surplus as at 30th Jun	e 1 97 3			£4098	£3905
(Note : £1000 of this surplus is earn House Fabric Fund) .	narked	for th	ne		
Made up of:					
Cash in hand and Bank current ac Savings Bank accounts	counts			£271 309	£203 202
Bookshop stock at valuation		• • •	• • •	2100	1640
Tie and Badge stock at valuation		• • •	• • • •	177 572	151 536
Debts due to Club Night store heaters—Cost	• • • •		£465	312	330
Less depreciation			285	180	270
Addressing machine—Cost Less depreciation			£530 230	300	400
Investments at cost, as below				2900	2900
				6809	6302
Less:					
Life Membership Fund Subscriptions paid in advance Debts due by Club Sum due to Endowment Fund 'Scottish Birds' Fund Sum earmarked for Library bindin	 g	•••	£675 54 1035 198 582 167		675 54 1236 113 152 167
•	_			0711	2397
				2711	2397
				£4098	£3905
Investments as at 30th June 1973:					
HIVESUMENES as at ovar vanc 10.0.			Market	At	At
			Value	cost	cost
Safeguard Industrial Investments I Ord. shares of 25p each			£560 888	£508 946	£508 946
1974/77 £550—5½% Conversion Stock 1974			1124 540	952 494	952 494
2000 0470 Conversion Secondary			£3112	£2900	£2900

ENDOWMENT FUND

(The free income of which is available for the advancement of ornithology)

Revenue Account for the year ended 30th June 1973

INCOME—			Year to 30/6/73	Year to 30/6/72
Interest and Dividends received (gross) EXPENDITURE—	•••		£242	£211
Grants as detailed in Report of Council			100	400
Unexpended income for the year	•••	•••	£142	(£189)
Balance Sheet as at 30	th J	une 19	73	
Endowment Fund as at 30th June 1972 Accumulated unexpended Income as at			£2519	£2519
30th June 1972 Add: Excess of Income over Expenditure	•••	£542 142		731 (189)
			684	542
			£3203	£3061
Made up of: Investments at cost as below:			£3011	£3011
Royal Bank of Scotland Deposit Account Due by Club's General Funds	•••	•••	94 198	88 112
Deduct: Grant allocated but not yet paid			3303 100	3211 150
			£3203	£3061
		Market	At	At
Investments as at 30th June 1973:		Value	cost	cost
1952 Units of the Equities Investment Trust for Charities £1140 5% Exchequer Stock 1976/78 £440 8½% Conver. Unsecured Loan Stock		£2803 969	£1000 1000	£1000 1000
1993/98 British Printing Corporation 250 St Andrew Trust Ltd., Ordinary 25p	Ltd.	330 53 1	441 570	441 570
		£4633	£3011	£3011

Note: £250, granted to the North Solway Ringing Group in 1971/72, is to be refunded in the next financial year. This refund has not been taken into account in the above figures.

HOUSE FABRIC FUND

Summary of Accounts for year to 30th June 1973

						Year to 30/6/73	Year to 30/6/72
RECEIPTS—							
Balance as at 30th Jur	ne 1972					£34	(£25)
Year's rent from Mr a			e Wat	erston		150	150
Year's rent from Britis							
Rehabilitation of					.,.	140	133
Grant from S.O.C. R		Accou	nt	***	44.6	_	300
Miscellaneous Interes	t		***	444	P.5.5	3	4
						£327	£562
						L321	£302
EXPENDITURE—							
The state of the s						£35	£127
Repairs and maintain	ance	***		200	£430	Loo	LIZI
Property Burdens Less Contribution fro	m tono	mta	* * *	1,101	193	237	372
Less Contribution ire	in tena	ints			100	207	512
Insurance					777	12	19
Miscellaneous	***		***	101	***	3	10
111500114115045	***						
						£287	£528
On deposit with Edi	nburgh	Buildi	ng So	ciety		40	34
						£327	£562

EDINBURGH, 24th September, 1973.—I have audited the foregoing Revenue Accounts for the year to 30th June 1973, and the Balance Sheet as at that date. I have accepted as correct Subscriptions and other receipts shown as received in the Books and the value placed on the Bookshop Stock. Subject to this I certify that in my opinion the foregoing accounts are correctly stated and sufficiently vouched.

(Signed) ARTHUR WALKER, Chartered Accountant.

REPORT OF COUNCIL

Your Council submits the following Report for the year 1972/73:

Membership At the end of the session the Club had 2560 members. This was a net increase of 189 during the year; 442 new members joined, a slight increase on last year (429). A table of membership for the past six years is given below.

Ordinary Junior Life Honorary	30/6/68 1677 265 3 4	30/6/69 1771 274 6 5	30/6/70 1849 286 9 5	30/6/71 1889 282 10 5	30/6/72 2054 298 14 5	30/6/73 2230 312 14 4
	1949	2056	2149	2186	2371	2560
Increase	162	107	93	37	185	189

The number of Deeds of Covenant rose from 445 to 464, representing 547 members, enabling us to reclaim £630 of tax.

Death It is with deep regret that Council records the death during the year of Clyde Bain, an Honorary Member since 1937.

Honours Council has great pleasure in recording the award of the C.B.E. in the 1973 New Year Honours to Professor V. C. Wynne-Edwards, a past President of the Club. A new award to prominent conservationists, the Order of the Golden Ark, has been instituted by Prince Bernhardt of the Netherlands. Among those to whom it has been awarded are the following Club members: Sir Frank Fraser Darling, Max Nicholson and Sir Landsborough Thomson.

Business of Council Five meetings of Council were held during the year and the Management Committee met three times. There were also meetings of the Library and Research Committees.

Secretarial Staff During the year, Mrs Waterston asked Council if she could in due course be transferred to part-time employment. With this in mind, Council appointed a new Bookshop Manager in view of increasing sales and work, Unfortunately the appointment only lasted from February to March. Mrs Winkworth joined the Staff on a part-time basis as a Clerical Assistant in May 1973 to help deal with invoicing and despatch of books, with Mrs Waterston continuing to manage the Bookshop.

In the spring, Mr Delaney informed Council that business commitments forced him most reluctantly to resign from editing Scottish Birds by the end of 1973. His resignation was received with great regret. Attempts were made by Council to find a voluntary replacement without success. Council then decided that a new salaried post should be created combining editing the journal with managing the Bookshop. The post was widely advertised and the Management Committee appointed Squadron Leader Harry Greig who joined the Staff in October 1973. A native of Stonehaven, Aberdeen, he retired from the Royal Air Force after thirty years service. While stationed in Cyprus in 1965 and 1966 he was Honorary Secretary of the Cyprus Ornithological Society and responsible for editing their Reports and bulletins; he has also written articles for other journals. He is a member of the BTO, RSPB, SWT and NTS. His editorial and administrative experience fits him well for the newly created post of Editor of Scottish Birds and Manager of the Bird Bookshop. We extend a warm welcome to Squadron Leader Greig.

Endowment Fund An Appeal was issued by the World Wildlife Fund for funds to purchase a sea-bird island in memory of James Fisher who was tragically killed in a car accident in September 1970. The island of Copinsay in Orkney was acquired, and Council approved a grant of £100 for the purchase of equipment on the island. Copinsay was officially opened as a Reserve, managed by the Royal Society for the Protection of Birds, on 7th July 1973 at a ceremony attended by many of James Fisher's old friends in the Club.

During the year the North Solway Ringing Group offered to repay the grant of £250 made from the Endowment Fund in 1972. The Group had spent much more than the grant on cannon netting equipment and wished to own it outright. Group members expressed their grateful thanks to Council for its support and the financial help given to start the project. Council accepted the offer and the grant is to be returned early in the next financial year. The Group gave assurances that the stringent conditions under which the grant was originally approved would be adhered to, and that the results of the work would be published in Scottish Birds.

21 Regent Terrace This building was gifted in 1958 in order that a Scottish Centre for Ornithology and Bird Protection could be established. Initially it housed the Club offices and Library, the Scottish office of the Royal Society for the Protection of Birds and the office of the Hon, Secretary of the Fair Isle Bird Observatory Trust. In 1968 the RSPB re-

quired more space and moved to 17 Regent Terrace. The concept of a Scottish Centre was in no way diminished and our very close liaison with the RSPB was maintained.

Mr and Mrs Waterston have been tenants since 1958, occupying the top two floors of the building, but they intimated to Council that they would vacate their flat before the end of 1973. Since the Scottish Wildlife Trust had been looking for new office accommodation, application was made to Edinburgh Corporation for change of use of the upper two floors from residential to office accommodation, but this was refused. An appeal is to be made and discussion about the future of the flat continues. As a matter of policy, Council endorsed a Management Committee decision that it would be of great value for closer liaison if the three organisations—SOC, RSPB and SWT—together with FIBOT, were located in the same area or even in the same building.

Conservation issues Council's policy, stated last year, is to lend full support to conservation bodies whenever requested. During the year action was taken in two areas in the north east-the Cromarty Firth and the Loch of Strathbeg.

Last year the Club, together with the Royal Society for the Protection of Birds, the Scottish Wildlife Trust and the Wildfowl Trust, petitioned jointly against the Draft Order setting up the Cromarty Firth Port Authority, because the Order gave no safeguards to the environment or the wildlife in the Cromarty Firth. The Hearing, which took place in April 1070 1973, resulted in a compromise, and an amendment acceptable to the four organisations was agreed. Effectively this requires the Port Authority to consult with the Countryside Commission and the Nature Conservancy before reclaiming any land below high water mark, and also prohibits the Port Authority from taking any steps to reclaim land within Udale Bay or certain prescribed parts of Nigg Bay.

In December 1972 the Gas Council applied to Aberdeen County Council for permission to establish a gas terminal and treatment plant on the former Crimond airfield by the Loch of Strathbeg. Because of the loch's ornithological importance, the Club lodged a protest against any development in the area. Resulting from the many objections, and petitions from several thousand individuals, the Gas Council withdrew its application in favour of a site at St. Fergus, a few miles south of the loch favour of a site at St Fergus, a few miles south of the loch.

Club Representation The Club continued to be represented on the British Section of the International Council for Bird Preservation by Sir

Landsborough Thomson and Mr George Waterston.

Miss Valerie Thom resigned as the Club's representative on the Duck Research Group of the International Wildfowl Research Bureau. Miss Thom represented the Club since 1968 and Council wishes to record its appreciation for the work she has done on behalf of the Club. Dr Roger Bailey accepted Council's invitation to be our new representative.

Annual Conference The Twenty-fifth Annual Conference and Annual General Meeting, held in Dunblane, were attended by a record number of over 400 members and guests, On the Saturday morning Professor J. D. Matthews, Head of the Department of Forestry at Aberdeen University, spoke on 'The Developing Woodlands of Britain'; he was followed by Dr Bruce Campbell whose subject was 'The Study and Conservation of Woodland Birds'. Mr H. N. Southern spoke on Sunday morning on 'Tawny Owls and their prey—a population study', and his talk was followed by Mr Bryan Sage's film 'The Living Tundra'.

At the Annual General Meeting, attended by over 200 members—a much greater number than usual, Council's statement on 'Club policy on Conservation and the Environment' was adopted. The statement is published in the winter 1972 issue of Scottish Birds. Branches A full programme of lectures was given in all Branches during the winter, and both summer and winter excursions were organised by Branches themselves. Council is once more very grateful to members of the Dumfries Branch for arranging the weekend excursion to the Solway goose grounds. The Stirling Branch organised a very successful weekend in Argyll.

Fieldwork On the recommendation of the Research Committee, set up in January 1972, Council adopted as official Club Enquiries the Effluent Enquiry organised by Mr B. Pounder, the Redwing Breeding Survey organised by Mr R. H. Dennis and Mr M. I. Harvey, the Great Crested Grebe Breeding Survey organised by Mr R. W. J. Smith, and the Crow Hybrid-Zone Enquiry organised by Mr A. Cook. An extremely useful paper by Mr I. H. J. Lyster, covering all current ornithological work in Scotland, was published in Scottish Birds.

During the year members of the Club also helped with a number of other projects: Winter Wildfowl Counts (Wildfowl Trust); Beached Bird Survey (RSPB); Estuaries Survey (BTO); Common Bird Census (BTO) and Rook Roost Survey (SOC). Members who might wish to help with any of these enquiries should contact the Club Secretary for the name and address of the Organiser.

Scottish Birds Four numbers of the journal, including the 1971 Scottish Bird Report, were published during the year.

Library Council wishes to record its thanks to those who made very generous gifts of books, journals and reprints to the Library. A number of new reference books were also added. Increasing use is made of the Reference Library and Council wishes to take this opportunity to remind members of the very extensive selection of reference books and journals which it contains.

Bookshop The demand for ornithological and other natural history books continued to increase and resulted in sales being over twenty five percent greater than last year. In order to meet this demand, Council authorised a larger stock holding.

Council is most grateful to the British Trust for Ornithology for allowing the Club to arrange a book display at its annual Conference in December. It was with much regret that the Club was unable to accept the invitation of the RSPB to take a display to the annual Conference of the RSPB and Irish Wildbird Conservancy at Newcastle, Co. Down.

Scottish Birds Appeal Fund In order to maintain the quality and high standard of the journal, and also to pay an honorarium to the Editor, Council instituted the Scottish Birds Appeal Fund in 1970. Members are reminded that donations, if possible by Deed of Covenant, will be most gratefully received.

During the year the Fund benefitted from two events. Mr Waterston gave a public lecture in the Usher Hall in March entitled 'A Naturalist in the Canadian Arctic'; he most generously gave the proceeds of this lecture to the Fund. Council expressed its thanks to Mr Waterston for this most welcome donation of £170. In October last year a Raffle was organised; £229 was raised making another very useful addition to the Fund.

Scottish Centre Throughout the year many postal enquiries were received from within Britain and overseas for information regarding holidays and birdwatching areas in Scotland. During the summer birdwatchers from many parts of the world called at the Scottish Centre for help and advice, and good use was made of the facilities in the Reference Library and the Bookshop.

Members of the Fair Isle Bird Observatory Trust, the Isle of May Bird and informal discussion groups met regularly throughout the winter. Observatory and Field Station Committee, and the Aberlady Bay Nature

Reserve Biological Committee were held in the Centre during the year, Acknowledgments Finally, Council wishes to record its sincere thanks to the many members who have given help and time to the Club. Those who serve on Committees, lead excursions, assist and advise in many other ways, give great service to the Club and pleasure to their fellow members; all this work is most gratefully acknowledged by Council.

For the Council,

GEORGE WATERSTON, President.

THIRTY-SEVENTH ANNUAL GENERAL MEETING OF THE CLUB

The Thirty-Seventh Annual General Meeting of the Club was held in the Hotel Dunblane Hydro, Perthshire, on Saturday 27th October 1973 at 6 p.m. Mr George Waterston, President of the Club, presided over an attendance of about 140 members.

Apologies Apologies for absence were received from D. G. Andrew, Dr D. A. Bannerman, T. Delaney and M. J. Everett.

Minutes The Minutes of the Thirty-sixth Annual General Meeting, held in Dunblane on 28th October 1972, were approved and signed.

Report of Council The Report of Council for Session 36, presented by the Chairman, was adopted.

Accounts The Accounts for the year ended 30th June 1973, presented by the Hon. Treasurer, were approved.

Appointment of Auditor Mr Arthur Walker C.A. was re-elected Auditor for the ensuing year.

Election of new Members of Council In the absence of any other nominations, the Council's recommendation for the election of the following Council Members was approved:

J. Edelsten and J. Mitchell to succeed Dr I. T. Draper and C. G. Headlam who were due to retire by rotation.

The Chairman thanked the retiring members for their service to the Club.

The Chairman announced Council's decision to co-opt two Young Members in future, each to serve for two years, of whom one would be co-opted annually. This new arrangement would benefit both Council and the Young Member. R. L. Swann would therefore serve for a second year and T. C. Johnson-Ferguson had been co-opted for the ensuing two years.

Subscriptions The Hon. Treasurer explained that Council had given very careful consideration to the subscription rates, in view of his forecast of a considerable excess of expenditure over income in the present financial year (1973/74). In spite of increased membership and Bookshop profits, the cost of staffing the Club, together with overheads and daily running expenses, had risen very steeply in the past few years. He suggested that the adult subscription might be raised from £2 to £3 and the joint subscription from £3 to £4.50, but that the junior membership might remain at 50p.

The Chairman pointed out that any change in subscription rates had to be approved at an Annual or Special General Meeting, for which at least one month's notice must be given, but he wished to have members' views on increases in subscriptions. In general members agreed that the suggested increase was both necessary and acceptable, and should be made before 1st October when subscriptions were next due to be paid. The Chairman took note of various suggestions and said that these would be considered by Council when making its recommendations to a future General Meeting.

Conference Location The Chairman recounted that the first Club Conference was held jointly with the British Ornithologists' Union in Edinburgh in 1946. This was the first weekend Conference ever held by any Ornithological Club or Society in Britain, and from 1948 the Club had held a weekend Conference annually. At first the location changed each year but since 1961 it had been held at Dunblane during the last weekend in October. A number of factors—mainly increased charges and the need to give the Hydro Management a guarantee of a minimum number both attending the Conference and staying at the Hydro—might mean a change in venue, and possibly date, for next year. All were agreed that the weekend Conference must continue, but members were divided regarding a change of date. The possibility of holding it at a University was suggested.

The Chairman said that the Secretariat would investigate the whole problem immediately and an announcement would be made as soon as possible.

Votes of Thanks The Chairman thanked all members and the staff of the Club who had helped to make the Conference a success. The Meeting closed with a warm vote of thanks to the President by J. H. B. Munro.

COUNCIL AND OFFICIALS OF THE CLUB FOR SESSION 37

Hon. Presidents: David A. Bannerman, O.B.E., LL.D., Sc.D., F.R.S.E.; Sir Charles G. Connell, W.S.; Sir Arthur B. Duncan; W. J. Eggeling, C.B.E., B.Sc., Ph.D., F.R.S.E.

President: George Waterston, O.B.E., F.R.S.E.

Vice-President: Andrew T. Macmillan, C.A.

Hon. Treasurer: Maxwell K. Hamilton, C.A.

Hon. Treasurer of House Fabric Fund: D. G. Andrew, W.S.

Secretary and Treasurer: Major A. D. Peirse-Duncombe.

Deputy Secretary: Mrs George Waterston.

Manager, Bird Bookshop: Sqn. Ldr. H. Greig.

Membership Secretary: Mrs R. D. Smillie.

Editor of "Scottish Birds": T. Delaney (to end Vol. 7); Sqn. Ldr. H. Greig (from start Vol. 8).

Assistant Editor of "Scottish Birds": D. G. Andrew, W.S.

Business Editor of "Scottish Birds": Major A. D. Peirse-Duncombe.

Council: J. H. Ballantyne, R. H. Dennis, J. Edelsten, F. D. Hamilton, Miss M. P. Macmillan, J. Mitchell, Dr I. Newton, N. Picozzi, H. Robb, B. S. Turner. Young Members co-opted for 1973/74: R. L. Swann, T. R. Johnson-Ferguson.

Branch Representatives to Council: Dr I. T. Draper (Glasgow); Miss G. L. C. Falconer (St Andrews); C. K. Mylne (Edinburgh); B. Pounder (Dundee); R. T. Smith (Dumfries); Dr M. E. Castle (Ayr).

BRANCH AND GROUP OFFICE BEARERS

Aberdeen: Chairman, N. Picozzi; Vice-Chairman, D. P. Willis; Secretary, Miss F. J. Greig; Committee, A. Duncan, A. G. Knox, R. F. Yule.

Ayr: Chairman, Dr M. E. Castle; Vice-Chairman, J. K. R. Melrose; Secretary, R. M. Ramage; Committee, Dr D. R. Hissett, R. H. Hogg, Mrs J. K. R. Melrose, J. Miller.

Dumfries: Chairman, R. T. Smith; Vice-Chairman, B. S. Turner; Secretary, W. Austin; Committee, J. McCubbin, T. Nisbett, Mrs E. M. G. Ross, J. Skilling.

- Dundee: Chairman, B. Pounder; Vice-Chairman, P. N. J. Clark; Secretary, Mrs A. Noltie; Committee, Dr D. G. Adamson, N. K. Atkinson, Dr D. M. Shepherd, D. B. Thomson.
- Edinburgh: Chairman, C. K. Mylne; Vice-Chairman, J. M. S. Arnott; Secretary, L. W. G. Alexander; Committee, Mrs C. M. Adams, I. V. Balfour-Paul, W. A. Craw, J. B. Murray.
- Glasgow: Chairman, Dr I. T. Draper; Vice-Chairman, Mrs H. S. C. Halliday; Secretary, Mrs M. Draper; Committee, Miss K. N. Calver, D. L. Clugston, A. Maciver, R. G. Nisbet.
- Inverness: Chairman, R. H. Dennis; Vice-Chairman, Rev J. M. Crook; Secretary, M. I. Harvey; Committee, Miss J. Banks, Miss P. R. Forbes, Mrs W. Morrison, W. G. Prest.
- St Andrews: Chairman, Miss G. L. C. Falconer; Vice-Chairman, I. G. Cumming; Secretary, Miss M. M. Spires; Committee, Miss M. H. E. Cuninghame, Miss J. McFarlane, Miss D. E. Rowling, J. S. Wiffen.
- Stirling: Chairman, K. P. Anderson; Vice-Chairman, P. Clark; Secretary, Dr D. M. Bryant; Committee, T. D. H. Merrie, A. B. Mitchell, Miss M. M. Riley, H. Robb. Young Member: G. Shaw.

Thurso: Chairman, Mrs P. M. Collett; Secretary, S. Laybourne.

SCOTTISH BIRDS RECORDS COMMITTEE

Chairman: D. G. Andrew.

Committee: A. G. S. Bryson, Sir Arthur B. Duncan, Dr W. J. Eggeling, A. T. Macmillan, Prof. M. F. M. Meiklejohn, Dr I. D. Pennie, Kenneth Williamson, George Waterston, Prof. V. C. Wynne-Edwards.

MANAGEMENT COMMITTEE

M. K. Hamilton (Convenor), D. G. Andrew, Dr I. T. Draper, A. T. Macmillan, H. Robb, George Waterston.

LIBRARY COMMITTEE

George Waterston (Convenor), Ritchie Seath (Hon. Librarian), A. T. Macmillan, Dr I. D. Pennie.

RESEARCH COMMITTEE

A. T. Macmillan (Chairman), R. H. Dennis, Dr I. Newton.

EDITORIAL COMMITTEE

A. T. Macmillan (Chairman), D. G. Andrew, T. Delaney, R. H. Dennis.

CLUB REPRESENTATION

British Section, International Council for Bird Preservation: Sir Landsborough Thomson, George Waterston.

International Wildfowl Research Bureau, Duck Working Group: Dr R. S. Bailey.

HONORARY MEMBERS

Duncan Anderson, Henry Boase, P. W. G. Gunn, Sir Landsborough Thomson.

SUMMER EXCURSIONS

Important Notes

- 1. Members may attend excursions of any Branch in addition to those arranged by the Branch they attend regularly.
- 2. Where transport is by private car, please inform the organiser if you can bring a car and how many seats are available. All petrol expenses will be shared.
- 3. Please inform the organiser in good time if you are prevented from attending an excursion where special hire of boats is involved. Failure to turn up may mean you are asked to pay for the place to avoid additional expense for the rest of the party.
- 4. Members, friends and visitors attending any Club excursion do so at their own risk. Neither the Leader nor the Club can be held responsible for an accident or injury on an excursion.
 - 5. Please bring meals as indicated (in brackets) below.

AYR

- Saturday 18th May LOCH OF THE LOWES, NEW CUMNOCK. Leader: R. H. Hogg. Meet Wellington Square, Ayr, 2 p.m. or Arthur Memorial Church, New Cumnock, 2.45 p.m. (tea).
- Saturday 15th June NESS GLEN, DALMELLINGTON (by kind permission of Mr A. B. Gavin). Leader: W. R. Brackenridge. Meet Wellington Square, Ayr, 2 p.m. or at North-West end of Dalmellington, 2.45 p.m. (tea).
- Saturday 14th September IRVINE FLATS. Leader: W. R. Brackenridge. Meet Wellington Square, Ayr, 11 a.m. or Irvine Harbour 11.45 a.m. (lunch).

Further information about all excursions from the Branch Secretary, R. M. Ramage, 57B St Quivox Road, Prestwick, Ayrshire KA9 IJF (tel. 0292 79192). Please send s.a.e. if writing.

DUMFRIES

- Sunday 26th May RSPB RESERVE, LEIGHTON MOSS, LANCASHIRE. Leader: Tom Nisbet. Leave Ewart Library, Dumfries, 9.30 a.m. (lunch and tea).
- Sunday 16th June LANGHOLM MOOR. Leaders: Tom Irving and Roger Smith. Meet at Kilngreen Car Park, Langholm 1 p.m. (lunch and tea).
- Sunday 7th July MULL OF GALLOWAY. Leader: William Austin. Meet at Mull Lighthouse 1 p.m. (lunch and tea).
- Sunday 4th August LOCHMABEN LOCHS and WATERFOOT. Leader: Bobby Smith. Meet at Bruce's Castle, Castle Loch, 12 noon (lunch and tea).

DUNDEE

The Dundee Branch will hold a number of excursions to places of ornithological interest during the summer. These will be announced at Dundee Branch meetings and members of other Branches will be very welcome to attend. For details please contact the Branch Secretary, Mrs A. Noltie, 14 Menteith Street, Broughty Ferry, Dundee DD5 3EN (tel. 0382 75074). Please send s.a.e. if writing.

EDINBURGH

Saturday 11th May ABERLADY BAY NATURE RESERVE. Leader: K. S. Macgregor. Meet Timber Bridge 2.30 p.m. (tea).

- Wednesday 22nd May BLACKFORD HILL. Leader: Dr L. L. J. Vick. Meet Blackford Pond 7 p.m.
- Saturday 25th May THE HIRSEL, COLDSTREAM (by kind permission of Sir Alec Douglas-Home). Excursion by private cars leaving Edinburgh from square behind National Gallery 10.30 a.m. for Hirsel 12 noon. Applications with s.a.e. to J. B. Murray, Woodlea, 49 Lochend Road, Edinburgh EH6 8DQ, (tel. 031-554 1934) stating number of seats available or required (lunch and tea).
- Saturday 1st June HUMBIE WOODS (by kind permission of Mrs C. W. Bayne-Jardine). Leader: G. L. Sandeman. Meet Humbie Kirk 2.30 p.m. (tea).
- Sunday 16th June ISLE OF MAY. Leader: Alastair Macdonald. Boat leaves Anstruther Harbour 9 a.m. Applications by 16th May with boat fare of £1.30 and s.a.e. to the organiser Mrs C. M. Adams, 18 Braehead Loan, Edinburgh EH4 6BL (tel. 031-336 4320) (lunch and tea). This excursion is subject to the availability of the boat.
- Sunday 21st July BASS ROCK (by kind permission of Sir Hew Hamilton-Dalrymple). Leader: F. D. Hamilton. Numbers limited. Meet North Berwick Harbour 2 p.m. for 2.15 p.m. departure (there will be no waiting for late comers). Application by 30th June with boat fare of £1.20 and s.a.e. to the organiser R. J. E. Whitworth, 6 Charteris Court, Longniddry, East Lothian (tel. Longniddry 2101) (tea).
- Sunday 8th September ABERLADY BAY NATURE RESERVE. Leader: K. S. Macgregor. Meet Timber Bridge 2.30 p.m. (tea).

GLASGOW

- Sunday 12th May TROSSACHS, Leader: Angus Maciver. Instruction in identification of wood and hill birds. Meet car park, Aberfoyle, 11 a.m. (lunch and tea).
- Saturday 18th May COREHOUSE ESTATE (by kind permission of the Scottish Wildlife Trust). Leader: Miss Kathleen Calver. Birds and plants. Meet car park, West Lodge, 2.30 p.m. (tea).
- Saturday 25th May INCHCAILLOCH, LOCH LOMOND (by kind permission of the Nature Conservancy). Leader: Dr Ivan Draper. Woodland birds. Meet Balmaha car park, 9.45 a.m. (lunch).
- Saturday 8th June HAMILTON HIGH PARKS (by kind permission of Hamilton and Kinneil Estates). Leader: Mrs Helen Halliday. Numbers limited. Applications with s.a.e. to Mrs Halliday, Dunard, 8 Clydesdale Road, Mossend, Bellshill, Lanarkshire, from whom further details will be available (lunch and tea).
- Sunday 7th July LITTLE CUMBRAE (by kind permission of Little Cumbrae Estates Ltd.). Leader: David Clugston. Application, with deposit of £1.00 and s.a.e., to David Clugston, 72 Meikleriggs Drive, Paisley (tel. Brediland 3483), from whom further details will be available (lunch and tea).
- Saturday 24th August ABERLADY BAY NATURE RESERVE. Leader: Russell Nisbet. Autumn migrants. Meet car park, Aberlady Bay, 11 a.m. (lunch and tea).

INVERNESS

The Inverness Branch will hold a number of excursions to places of ornithological interest during the summer. These will be announced at Inverness Branch meetings and members of other Branches will be very welcome to attend. For details please contact the Inverness Branch Secretary, M. I. Harvey, Clach Bhan, Loaneckheim, Kiltarlity, Inverness-shire (tel. Kiltarlity 328). Please send s.a.e. if writing.

ST ANDREWS

Applications with s.a.e., not later than one week before each excursion, to Miss M. M. Spires, Greenacre, 87 Hepburn Gardens, St Andrews, Fife (tel. 033 481 2418).

Saturday 11th May KILCONQUHAR LOCH (by kind permission of the Elie Estates). Meet North Lodge, 2.30 p.m. (tea).

Saturday 8th June ARBROATH CLIFFS. Leave Kennedy Gardens car park 2 p.m. (tea).

Sunday 23rd June AN ANGUS GLEN. Leave St Andrews bus station 9.30 a.m. (lunch and tea).

Saturday 6th July TENTSMUIR, Leave Kennedy Gardens car park 2 p.m. (tea).

STIRLING

The Stirling Branch will be holding excursions to places of local ornithological interest on the following dates:

Sunday 19th May Bird identification course.

Saturday 15th June Bird identification course.

Sunday 14th July B.T.O. Habitat Register.

Saturday 10th August Ringing demonstration.

Sunday 15th September B.T.O. Habitat Register.

All excursions will be led by a member of the Stirling Branch familiar with the area to be visited. Transport will be by private car. Anyone wishing to join an excursion should contact the Branch Secretary, Dr D. M. Bryant, Department of Biology, University of Stirling not later than two weeks before each date, stating whether transport is required or seats are available for others. Please send s.a.e. Bring (lunch) on all excursions.

ANNUAL CONFERENCE

Members will have read in the Minutes of the last Annual General Meeting, printed earlier in this issue, that there might be a change in the venue of the Annual Conference. The increase in charges quoted by the Hotel Dunblane Hydro for 1974 (26% up on 1973, which were themselves 29% up on 1972), coupled with a requirement to guarantee certain minimum numbers staying at the Hydro and attending the Annual Dinner, made it impossible to accept the quotation.

A number of possible venues has been investigated and it has been decided to hold the next Annual Conference at Stirling University from 24th - 26th January 1975. The choice of date was determined by the availability of facilities at the University and the need to avoid other ornithological conferences. Full details will be sent to all members next autumn. A decision regarding the date and location of the next Annual General Meeting has still to be made.

WESTERN NATURALIST

The Renfrewshire Natural History Society, as part of its 125th anniversary celebrations, has founded a new journal, the Western Naturalist. The first volume, published in 1973, was a complete issue for 1972, and the second volume, a complete issue for 1973, will be published early in 1974. From 1974 the Society hope to start publication two or three times a year.

The annual subscription to the Western Naturalist is £2.00, but the Committee of the Renfrewshire Natural History Society has generously agreed to let members of the Club receive the journal at half price, i.e. £1.00 post free. Subscriptions should be sent to Dr J. A. Gibson, Foremount House, Kilbarchan, Renfrewshire.

The Scottish Ornithologists' Club

TWENTY-SIXTH ANNUAL CONFERENCE HOTEL DUNBLANE HYDRO, PERTHSHIRE 26th - 28th October 1973

PROGRAMME

Friday 26th October

4.30 - 7.30 p.m. Conference Office in the Hotel Dunblane Hydro open for and 8 to 9 p.m. members and guests to register and collect name cards and Annual Dinner tickets.

6.15 p.m. Meeting of Council.

8.30 to 9.30 p.m. FILM AND SLIDE PROGRAMME in the Ballroom. At 9.30 p.m. details of excursions on Saturday afternoon

will be given.

10 p.m. Meeting of Local Recorders.

9.30 p.m. to Lounges open for informal discussions and refreshments midnight (late licence).

Saturday 27th October

8.45 to 9.15 a.m. Conference Office open for registration,

Official opening of the Conference in the Ballroom. ADDRESS OF WELCOME by Mr K. Matheson, Provost 9.20 a.m.

of Dunblane.

LECTURE, "The structural and functional consequen-9.30 a.m. ces of flight—or what you need to be a bird" by Professor A. S. King, B.Sc., Ph.D., M.R.C.V.S., Head of the Department of Veterinary Anatomy, University of

Liverpool.

11 a.m. INTERVAL for coffee and biscuits.

11.30 a.m. LECTURE, "The impact of the oil industry on Scotland's coasts and birds" by Professor George M. Dunnet, B.Sc., Ph.D., F.R.S.E., Zoology Department, University

of Aberdeen

INTERVAL for Lunch. l p.m.

EXCURSIONS by private cars leaving the Conference Hotel car park. Details will be posted on the Conference 2 p.m.

notice board.

2.30 p.m. MEETING of members of the R.S.P.B. in the Ballroom. to which members of the Club and their guests are

invited.

4.30 to 5.30 p.m. MEETING of participants of the Birds of Estuaries Enquiry and the Wader Study Group to which all who are

interested in waders are invited.

37th ANNUAL GENERAL MEETING OF THE CLUB 6 p.m.

in the Ballroom.

Business:

(1) Apologies for absence.

(2) Approval of the Minutes of the 36th Annual General Meeting of the Club held in Dunblane on 28th October 1972 (see Scot. Birds 7: 220).

(3) Matters arising from Minutes.

(4) Report of Council for Session 36.

- (5) Approval of Accounts for Session 36.
- (6) Appointment of Auditor.
- (7) Election of new Members of Council. The Council recommends the election of J. Edelsten and J. Mitchell to replace Dr I. T. Draper and C. G. Headlam who are due to retire by rotation.
- (8) Subscriptions: the present rates of £2.00 (Adult). £3.00 (Joint) and 50p (Junior) were approved at the Annual General Meeting in 1969. They became effective for new members on 1st November 1969 and for existing members on 1st October 1970. Council consider that these rates are now unrealistic in view of the greatly increased costs over the past four years. The matter will be discussed at the Meeting.
- (9) Any other competent business.
- ANNUAL DINNER in the Dining Room of the Hotel 7.30 for 8 p.m. Dunblane Hydro (dress informal).

Sunday 28th October

9.30 a.m. LECTURE, "An ornithological survey of Iranian Bal-

uchistan" by Mr D. I. M. Wallace.

10.45 a.m. INTERVAL for coffee and biscuits.

11.15 a.m. FILMS: a programme with some new film on Scottish

birds of prey by Chris Mylne, and some historic film on the Golden Eagle by the late H. A. Gilbert, by kind permission of his son Mr E. Gilbert.

l p.m. INTERVAL for Lunch.

EXCURSIONS (informal), leaving the Conference Hotel 2 p.m.

car park.

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Owls of the World John Burton	£5.95
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Waterfowl of the World Delacour 4 vols	set £40.00
The Technique of Bird Photography Warham	£3.00
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A New Dictionary of Birds Landsborough Thomson	£6.75
The Coastline of Scotland Steers	£10.50

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NOTICE TO CONTRIBUTORS

- 1. General notes (not of sufficient importance to be published on their own as Short Notes) should be sent to the appropriate local recorders for inclusion in their summary for the annual Scottish Bird Report, not to the editor. A list of local recorders is published from time to time, but in cases of doubt the editor will be glad to forward notes to the right person. All other material should be sent to the editor, Tom Delaney, 31 Starbank Road, Edinburgh, EH5 3BY. Attention to the following points greatly simplifies the work of producing the journal and is much appreciated.
- 2. If not sent earlier, all general notes for January to October each year should be sent to the local recorders early in November, and any for November and December should be sent at the beginning of January. In addition, local recorders will be glad to have brief reports on matters of special current interest at the end of March, June, September and December for the journal. All other material should of course be sent as soon as it is ready.
- 3. All contributions should be on one side of the paper only. Papers, especially, should be typed if possible, with double spacing. Proofs will normally be sent to authors of papers, but not of shorter items. Such proofs should be returned without delay. If alterations are made at this stage it may be necessary to ask the author to bear the cost.
- 4. Authors of full-length papers who want copies for their own use MUST ASK FOR THESE when returning the proofs. If requested we will supply 25 free copies of the issue in which the paper is published. Reprints can be obtained but a charge will be made for these.
- 5. Particular care should be taken to avoid mistakes in lists of references and to lay them out in the following way, italics being indicated where appropriate by underlining.

DICK, G. & POTTER, J. 1960. Goshawk in East Stirling. Scot. Birds 1: 329. Eggeling, W. J. 1960. The Isle of May. Edinburgh and London.

- 6. English names should follow The Handbook of British Birds with the alterations detailed in British Birds in January 1953 (46:2-3) and January 1956 (49:5). Initial capitals are used for names of species (e.g. Blue Tit, Long-tailed Tit) but not for group names (e.g. diving ducks, tits). Scientific names should be used sparingly (see editorial Scottish Birds 2:1-3) and follow the 1952 B.O.U. Check-List of the Birds of Great Britain and Ireland with the changes recommended in 1956 by the Taxonomic Sub-Committee (Ibis 98:158-68), and the 1957 decisions of the International Commission on Zoological Nomenclature (Ibis 99:396). When used with the English names they should follow them, underlined to indicate italics, and with no surrounding brackets.
- 7. Dates should normally be in the form "1st January 1962", with no commas round the year. Old fashioned conventions should be avoided—e.g. use Arabic numerals rather than Roman, and avoid unnecessary full stops after abbreviations such as "Dr" and "St".
- 8. Tables must be designed to fit into the page, preferably not sideways, and be self-explanatory.
- 9. Headings and sub-headings should not be underlined as this may lead the printer to use the wrong type.
- 10. Illustrations of any kind are welcomed. Drawings and figures should be up to twice the size they will finally appear, and on separate sheets from the text. They should be in Indian ink on good quality paper, with neat lettering by a skilled draughtsman. Photographs should either have a Scottish interest or illustrate contributions. They should be sharp and clear, with good contrast, and preferably large glossy prints.



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