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SCOTTISH BIRDS



THE JOURNAL OF THE
SCOTTISH ORNITHOLOGISTS' CLUB

Vol. 13 No. 2

Summer 1984

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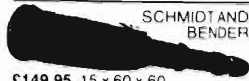


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Volume 13 No. 2

Summer 1984

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

Editorial

In this number we celebrate the Golden Jubilee of the Isle of May Observatory, with an article by one of its founder-members—Ian (J. H. B.) Munro. The initiative shown by the enthusiastic band of young Edinburgh birdwatchers who raised the money necessary to get the place going has been amply rewarded over the last 50 years, not only by the valuable ornithological work carried out there, but also by the way in which succeeding generations have continued to use and enjoy the island and its modest accommodation.

One wonders what it might cost today for even such basic living and working facilities as those provided in 1934—and to what extent progress would today be dependent upon grant-aid? In 1934 those involved simply buckled to and succeeded in raising £83—and it cost them just £31 to furnish the Observatory (then in the old Lookout, not the Low Light), £21 to construct a trap and “catching garden”, and £10 to equip the ringing hut and library. Times have indeed changed!

It is worth remembering that we owe a considerable debt of gratitude to the relatively small number of birdwatchers active in the 1930's. They were responsible for establishing not only the first observatories, but also the BTO—founded in 1933, and of course the SOC, which celebrates its Golden Jubilee in 1986. But for their foresight and enthusiasm the science—or should it be art?—of birdwatching would almost certainly be much less advanced than it is today.

Thank you, Roy! On page 63 there is a brief note reporting that Roy Dennis is handing on his responsibilities as compiled/editor of the SBR. Roy has carried out this time-consuming—and often thankless—task for some 14 years, during which it has grown enormously. We thank him most sincerely for all the time and effort he has put into this work, and record our pleasure that he is maintaining his involvement, though on a more limited scale.

The Isle of May Bird Observatory and Field Station 1934 to 1984 : some personal reflections

J. H. B. MUNRO

Ian Munro has been associated with the observatory since the very beginning and still visits it regularly. He acted as Hon. Treasurer for 40 years, retiring from that onerous post only in 1974.

When W. J. Eggeling published his comprehensive book "The Isle of May" in 1960 he included a fascinating description of the start of the Bird Observatory and its history up to some 25 years ago. Frank Elder, who wrote this, was the first Hon. Secretary and piloted the Observatory through many exciting years, much encouraged by the indefatigable George Waterston and other committee members. What I plan to do here is to jot down some reminiscences, and then to bring the history up to the end of the first 50 years.

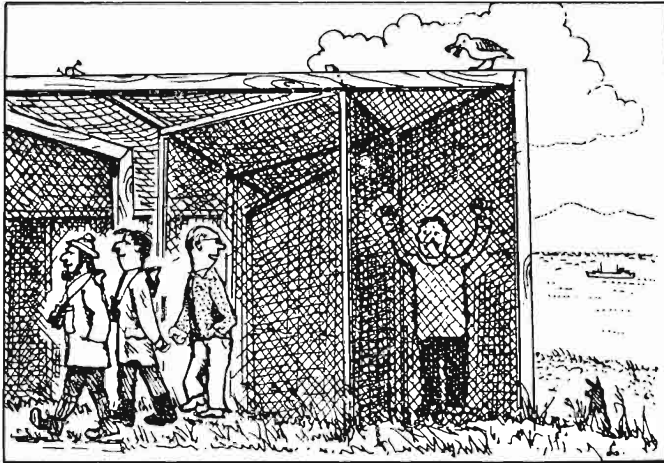
The original home of the Observatory, the Lookout (now, alas, a pile of unsightly rubble), was ideal for us in the early days. It commanded an extensive view of the island, and when birds were at the light we got great views of them looking like snowflakes as they flew up the beam, sometimes with predators circling round. On special occasions the Principal Lightkeeper allowed us to visit the lighthouse balcony, and I well remember a fluttering bird being picked off the glass by hand and finding, when it was examined in the Lookout, that it was a Yellow-browed Warbler.

The Lookout had one double-tiered and one single bunkroom, and a kitchen range which burned coal—and driftwood when available; paraffin stoves were also used for some of the cooking. Our personal washing was done in tin basins using cold water from the tank outside the Beacon. We were rather crowded but comfortable, as the rule was (and still is) that no more than 6 observers were allowed on the island at one time.

In those days the Lightkeepers kept goats and hens, so on occasion we were able to get milk and eggs. There was also Paddy the horse, who could never be found when the Lighthouse coal boat arrived, but once caught and harnessed to the cart would pull willingly enough. He was a crafty beast and even learned to open doors and gates. We were told by Lachie McInnes (the Principal Keeper and a great "character") that

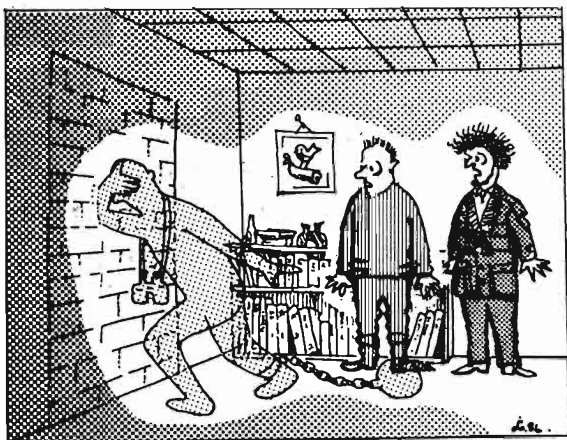
on one occasion the horse opened the back door of the Principal's house in Fluke Street and walked into the kitchen. Paddy refused to turn round, so Lachie had to remove most of the furniture to get him out.

When the "Mars" came ashore in 1936, and became a total wreck, the ship's bell was rescued and mounted on a stanchion at the Lookout, where its tolling was very useful in alerting observers scattered about the island. Sadly, the bell has been missing for many years now. The following year, when the "Island" also crashed on the rocks, it is reputed that, in the best "Whisky Galore" tradition, several cases of liquor were "salvaged" and stored in the Loch until any hue and cry had subsided—but when the rope tethering them to the pier was eventually hauled in it broke. Tradition maintains that the cases may still be in the loch but I, for one, doubt it.



Unfortunately the march of progress has decreed that the May is now a rock station (since 1972) with no wives and children any more. For a time there was a deserted child's swing in the top trapping garden—a sad sight. There are now no domestic animals or hens. Sheep were introduced in 1955 and increased to 100 ewes and lambs in 1959, reducing the grass growth to something approaching the close-cropped sward of earlier pre-myxomatosis years; they were finally removed in 1960. Much tidying up of the island has taken place recently; the wooden railway sleepers in the thistle field and the Crow Trap have been removed, as have the sheep "fanks" round the cover of the Low Trap.

An impressive list of projects has built up since biological research started in 1966, when Durham University instituted a 3-year study of Herring and Lesser Black-backed Gulls. This was carried out by Jasper Parsons, who was resident on the May for several months each year. In addition to being a great help with Observatory work, he found time to experience the Low Light phantom. One night about midnight he heard foot-steps coming round past the livingroom windows but no visible body was seen in the rays of the lighthouse beam. The foot-steps entered through the closed front door, passed through the bedroom and continued through the wall where the outline of the original door can be seen. They were then heard climbing the stair to the old light chamber.



Since then there have been research projects on Shags, on the island's house mouse (by Graham and Della Trigg—working under the direction of Dr Sam Berry—who occupied the "Mouse House", a comfortable wooden building erected south of the Low Trap), on the behaviour of rabbits and gulls, and of course Mike Harris's study of the Puffins, which have increased so spectacularly in recent years. The much-publicised culling of gulls started in 1972 following heavy erosion of the vegetation; the numbers destroyed give some indication of the size of the problem: 1972—16,000; 1973—10,500; 1974—9,000. Since then culling has been repeated from time to time on a minor scale. Unlike other Bird Observatories, the May has never had a resident warden, but in 1975 the Nature Conservancy Council introduced a summer warden to control the increasing flow of trippers. In 1978 grey seals began to come ashore in numbers, appropriately enough on Rona; some 150

pups were born that year and by 1982 the number had risen to 615. This increase was probably associated with disturbance on the Farne Islands.

Going back in time to other events in the history of the May: a memorable visit by eminent ornithologists from the BOU and SOC, among them James Fisher, Frank Darling, David Lack and W. B. Tucker, took place on 22 June 1947. In 1956 the island became a National Nature Reserve by virtue of a 99-year lease between the owners (the Commissioners of Northern Lighthouses) and the Nature Conservancy; the rights of the Bird Observatory are fully safeguarded. In 1958 St Adrian's Chapel and the Beacon were scheduled as ancient monuments, and in 1960 a party from St Augustine Abbey, Ramsgate, celebrated mass in the chapel for the first time since the Reformation 400 years ago. On a beautiful day in 1974 a small party of old friends carried out M. F. M. Meiklejohn's last wish and scattered his ashes on the island he loved so much. But surely the most surprising event ever was the arrival in July 1982 of an American, John Douglas Dowie, who turned out to be a direct descendant of Lucy Anderson, the only one of the Anderson family saved when they were overcome by fumes from the Beacon in 1701. It seems that a young lad, Hugh Dowie found the child and later married her; the pair emigrated to America and John Douglas Dowie was their great-great-great-great-grandson!

Turning again to the Observatory and its activities, there are now four Heligoland-type traps in operation. The original "Low" trap erected in 1934 continues to function well and is a wonderful testimonial to Frank Elder's design and the materials used. The "Top" trap has been redesigned several times, while the 1948-49 "Bain" trap was replaced in 1983 by a new "fruit cage" of plastic netting which can be dismantled and stored away for the winter. The erection in 1975 of the "Arnott" in 5 days by a team of four was a triumph of discipline as the island was filled with exciting birds. There were Robins flitting all over the place, Pied Flycatchers, Wrynecks, Redstarts, Ortolan and Rustic Buntings and even two Pallas's Sand Grouse seen flying over the ringing hut. But the phenomenal migrant fall of October 1982, described in *Scottish Birds* 12(8), was probably the biggest ever recorded on the Isle of May.

The financial situation of the Bird Observatory has been remarkably resilient over the years, with contributions from the Universities and the NCC and sums charged to observers generally proving adequate to cover the observatory's work and normal maintenance to traps and buildings. When exceptional costs have had to be met, very welcome grants have been re-

ceived from : Helena Howden Trust (£227 in 1960), SOC Cruise (£100 in 1967), NCC (£148 in 1975) and George Waterston Trust (£525 in 1982). In 1964, when over £800 had to be spent on repairs, friends of the May gave interest-free loans amounting to £230. Inflation and recession have recently hit the Universities, however, and the consequent reduction in funding from this source has led to an increase in charges to observers. These are currently £2/night (25p in 1960) and £7/return boat trip (75p in 1960).

The Observatory could not have operated without the devoted service of the fishermen from the Fife ports who make the "island run". They are a wonderful breed of men and good friends. It is perhaps invidious to mention names, but several stand out in the memory. Geordie Mackay, of viking appearance and temperament, who seemed to enjoy icy spray on his face. Andrew Blackery who once landed a party at the Altar-stanes at midnight, when lack of water made it impossible to land them below the iron stairs, and on another occasion took a party ashore in dense fog. Later there was the Hughes clan, Jimmy, his father and Willie—all great value. Now in 1984 we have the faithful and highly efficient Jim Smith; it is a real pleasure to watch his handling of the "Breadwinner".



The Lighthouse staff too have been extremely kind and helpful over the years, and again one remembers some more vividly than others. There was Lachie McInnes who, in the early days, entered into our ploys as far as his duties allowed and gave us much excellent advice and practical help. He also

stocked the loch with trout and kept the 3-hole golf course (listed at one time in the Golfer's Handbook as the smallest course in the world) in good order. One remembers too, with gratitude, Andrew Mathewson, Bert Leslie and, more recently, Willie Watt and his wife who were always so welcoming and helpful. And we will certainly not forget John Bain, who unaided and under extreme weather conditions built the trap which bears his name.

Observers visiting the May have always carried on the day to day maintenance and development work, and several stand out for exceptional performance. A. D. Watson and M. K. Hamilton were tireless in the early days. H. Dacker specialised in movable bird traps and shrub protection fences; the spruces which form part of the Top Trap cover were planted by him. A. G. S. Bryson was involved in most of the early trap-building; his "Bryson baffles", which prevent birds breaking back from the trap funnels continue to allay alarm and despondency. More recently Ian Balfour Paul has done an immense amount of work, as has Bernard Zonfrillo. Others have been involved on the administrative side, and of these G. L. Sandeman, Alastair Macdonald, Bill Alexander, Lynne Arnott and now Rosemary and Charles Cowper have done outstanding work.

Finally, what has been achieved over the last 50 years has been largely due to the enthusiastic labours of the Hon. Secretaries, each of whom has impressed his or her personality on the growth of the Observatory. Their names are: H. F. D. Elder, W. J. Eggeling, Nancy Gordon, J. M. S. Arnott and now the indefatigable Bernard Zonfrillo (who surprised even his sponsors and raised £150 for Observatory funds when he ran in the Glasgow Marathon Race in 1983). We should remember them all.

Since the war many improvements have been carried out at the Low Light. The roof has been replaced, the livingroom gutted and re-lined, and the whole building redecorated. Glass fibre water tanks have been installed by NCC. And recently added amenities include new floor coverings, a wood burning stove and comfortable furniture. The Isle of May Bird Observatory and Field Station continues in good heart, and so—on to the next 50 years.

*J. H. B. Munro, 9 Capelaw Road,
Edinburgh 13*

Long-term seabird monitoring on the Isle of Canna

R. L. SWANN and A. D. K. RAMSAY

In many seabird monitoring projects it is only feasible to check sample areas. On Canna, however, the area and numbers involved make it practicable to count the entire breeding population of most species.

Canna, one of the Small Isles group south of Skye, does not have the largest seabird populations in northwest Scotland but the relative accessibility of its colonies make them ideal for the long term study of seabird numbers. Many seabird species have shown large changes in numbers over the last twenty years; this paper documents the changes that have taken place on Canna.

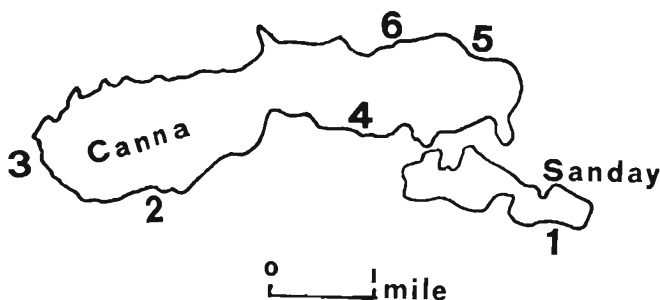


Fig. 1 Main seabird colonies on Canna

- 1 Eusabric, Sanday 2 The Nunnery 3 Boro'osgor 4 Tarbert Road
5 Laumasgor 6 Geugasgor

Methods

Counts were made in late June or early July from 1969 to 1983 and a few earlier counts are also available (table 1a). In 1969 and 1970 all counts were land-based; subsequent counts have been made from both land and sea. Normally only one count of the island is made each year and complete counts have been made for all species except Guillemot and Razorbill since 1974. For Guillemot and Razorbill a series of sample areas are counted.

The units for, and methods of, counting were as follows :

Fulmar: apparently occupied suitable site.

Larus gulls: pair holding territory.

Kittiwake: nest.

Black Guillemot: individual bird.

The above species were counted by both authors and there was normally good agreement (usually to within 5%) between counts. Where there was a bigger discrepancy a recount by both observers took place and the mean of the counts was taken.

Shag: nest.

Guillemot: egg or young, including addled eggs and dead young.

Razorbill: egg, young or site (obvious due to broken shells or concentration of droppings below a boulder or on a small ledge.)

These three species were counted by three or more observers moving slowly and carefully through clearly defined areas and recording all 'nests'.

The breeding success of Manx Shearwaters and Shags was also assessed, by checking marked nests in April, May, July and August to determine eggs laid, number hatched and number of young fledged or likely to fledge.

Rates of increase have been calculated from linear regressions of counts against year, using all available counts (n) over the stated period; r is the correlation coefficient (the closer to 1.0 the better the data fit the line). The term significant is used when there are differences significant at the 5% level.

A total of 33,182 birds were ringed on Canna between 1969 and 1983, the main species being Guillemot (11359), Shag (6107), Manx Shearwater (5550), Herring Gull (4787) and Razorbill (2718). This ringing programme has provided information on dispersal from the island, rates and causes of mortality, age of return to the island and age of first breeding.

Results

The counts of each species are given in tables 1a and b.

Fulmar Became established first on Sanday in 1930; birds prospected the north cliffs of Canna in 1935, and sites were occupied in 1936. The total population reached a peak of 669 sites in 1977. Between 1963 and 1983 the Sanday colony increased significantly at an average rate of 4.7% pa (n 14, r 0.83). On Canna the colony also increased significantly, at an average

Table 1a. Early seabird counts on Canna.

	1933	39	46	61	62	63	69	70	71	73
Fulmar										
Sanday			21			40	62	60	54	79
*Canna		150				85+			337	358
Great Black-backed Gull	10			17		18	58	60	56	61
Lesser Black-backed Gull						12		40	51	54
Herring Gull				225+	290+	335+	1149	887	874	859
Kittiwake										
Sanday					120		157	167	146	151
*Canna					400				430	448

Table 1b. Canna seabird counts 1974-1983.

	1974	75	76	77	78	79	80	81	82	83
Fulmar										
Sanday	78	92	122	96	70	110	112	95	110	92
*Canna	493	494	495	573	552	428	556	299	438	388
Shag	856	912	548	886	975	883	1168	1139	1507	1498
Great Black-backed Gull	59	69	60	63	60	41	56	55	61	65
Lesser Black-backed Gull	54	69	63	62	61	39	36	38	43	46
Herring Gull	1033	1166	1140	971	814	829	886	1000	1212	1151
Kittiwake										
Sanday	176	187	217	205	237	241	299	341	316	308
*Canna	565	635	640	685	635		660	640	675	674
Razorbill	194	287	388	440	475	518			510	534
Black Guillemot	36	60	51	85	76	78	111	144	114	115

Note: Counting units are indicated in the text. Counts marked thus * have been made from the sea and are therefore likely to be slightly less accurate than land based counts.

rate of 9% pa. (n 6, r 0.93) from 1971-77, to reach a peak of 573 sites. Since 1977 there has been no significant increase, indeed numbers have decreased and several previously occupied sites at Geugasgor are now abandoned (table 2). Our Canna results fit in with the national trend in Fulmar numbers: a 7% pa. increase in the 1960's (Cramp et. al. 1974), which may have dropped to 4% pa. in the 1970's (Stowe 1982). The decrease on Geugasgor is most noticeable below the roosting/loafing sites of introduced immature Sea Eagles from neighbouring Rhum.

Manx Shearwater The main colony is along the south crags by the road to Tarbert, where the birds have been recorded in 'hundreds, possibly thousands' since at least 1933. In 1973 and 1974 we counted apparently occupied burrows and

Table 2. Fulmar numbers at the three main sub-colonies on Canna since 1977.

	1977	1978	1979	1980	1981	1982	1983
Sanday	96	70	110	112	95	110	92
E. of Laumasgor	104	102	87	118	65	100	123
Geugasgor	412	410	319	413	185	248	223

put the island population at 1000-1500 pairs (Swann and Ramsay 1976). In 1887 and the 1930's colonies were also reported from the east half of the north cliffs and in 1948 from the west half; both these areas have long since been deserted.

Sixty-six observation burrows scattered throughout the Tarbert Road colony are checked annually for breeding success and occupancy rate. The number of occupied burrows in the study plots remained constant from year to year, indicating a fairly stable population (table 3). Breeding success was more variable, with success being low in 1973 and 1974, both years of high rat predation on small chicks in certain parts of the colony. In 1975 warfarin was placed by burrows in infested areas and this appeared to bring the problem under control. There was another poor season in 1981, when the presence of dead young and a few dead adults suggested food shortage or disease. It was possibly the remains of these birds that attracted the rats which devastated the colony in 1982. Warfarin was again used in 1983 to bring the rats under control.

Table 3. Manx Shearwater burrow occupancy and breeding success on Canna 1973-1983.

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
No. of Study burrows	(32)	(41)	(29)	50	63	66	59	54	58	58	46
Percentage occupied				73%	72%	75%	78%	77%	65%	73%	82%
Chicks fledged per egg laid	0.51	0.57	0.75	0.51	0.83	0.73	0.61	0.76	0.25	0.02	0.68

Note: Figure in brackets represent the number of burrows actually laid in 1973-1975.

Ringling recoveries have shown that birds disperse quickly from Canna in September and have arrived in their South American winter grounds off Brazil and Uruguay by the end of October. Young birds return to west coast waters in their third year and many are breeding by their fifth year. Breeding adults appear to feed locally in the Minch (for fuller details see Swann and Ramsay 1976).

Shag Several large colonies have existed since at least the 1900's. The first complete island counts were not made until 1974. Between 1969 and 1973 rough counts are available for only two colonies (table 4) and these show wide fluctuations with notable decreases in 1970 and 1973. Since 1974 the island

population has increased significantly, at a mean annual rate of 8.3% (n 10, r 0.77). This is similar to what is happening in several east coast colonies (Harris and Galbraith 1983).

Table 4. Counts at two Canna Shag colonies 1969-1974.

	1969	1970	1971	1973	1974
Nunnery	250	50	260	100	143
Boro'osgor	500	70	450	124	258

Since 1977 60 marked nests in the colony at Boro'osgor have been used to measure breeding success (table 5). Average clutch size has ranged between 2.4 and 2.8, lower than the mean of 3.01 ± 0.04 on the Farnes (Potts et. al. 1980). Breeding success, in contrast, was better, with even the poorest years on Canna producing more young per pair than the 0.9 - 1.15 on the Farnes. Most Farnes birds, however, nest on open sub-optimal ledges (Potts et. al. 1980), whereas only 4% on Canna do, the rest being in sheltered boulder sites on the raised wave-cut platform 15 - 45 m. above sea level. With such sites available Canna birds are less likely to fail completely than are the Farnes birds, hence their higher success rate.

Table 5. Shag breeding success Canna 1976-83.

	1976	1977	1978	1979	1980	1981	1982	1983
No. of Study nests occupied	43	42	39	43	49	43	46	50
Average clutch size	2.7	2.5	2.6	2.5	2.6	2.4	2.8	2.8
Average no. of young fledged per pair	1.4	1.6	2.1	1.4	1.8	1.8	2.1	1.8

Young birds disperse from Canna in late summer. The mean annual dispersal distance is in the order of 55 - 60 kms. with 63% of recoveries coming from the Outer Hebrides (mainly Barra and the Uists), 19% from Skye and the adjacent mainland of northwest Scotland, and the remaining 18% from further south in Argyllshire, mainly around Coll and Tiree. Young birds return to the island in their second year. In recent years a few two year olds have been recorded breeding but most do not nest until their third year or later. Adult dispersal is similar to that of first year birds (for fuller details see Swann and Ramsay 1979).

Lesser Black-backed Gull Twelve pairs in 1963 increased to an average of 57 pairs (S.E. 3.4) between 1970 and 1978, but numbers have since dropped to a mean of 40 pairs (S.E. 1.8). The few ringing recoveries show a dispersal south via France and Portugal to wintering areas in North Africa, with one recovery in Morocco.

Great Black-backed Gull Increased from 10 pairs in 1930's to 65 pairs in 1983. Since 1969 numbers have remained fairly stable, at an average 59 pairs (S.E. 1.7), but the overall increase between 1962 and 1983 was significant, averaging 3.5% pa. (n 15, r 0.59). Two recoveries, one of an adult and the other of a first year bird, were both in the Irish Sea.

Herring Gull increased from 225+ pairs in 1961 to 800+ pairs by 1969. Since 1969 numbers have fluctuated greatly (814 - 1449 pairs) with no significant increase. Although many east coast gull colonies were increasing at a fairly rapid rate into the 1970's (Duncan 1981) numbers there also appear to have stabilised in recent years (R. W. J. Smith pers. comm.). Numbers have also been stable at more northerly colonies (Furness 1981, Mudge 1981) and at other west coast colonies (P. Monaghan pers. comm.). Young Herring Gulls disperse from the island in late summer with most moving south to wintering areas in Central Scotland, but a few winter in Northern Ireland and some as far south as the English Midlands and even Cornwall; most remain dispersed for their first three to four years. Adult birds also disperse widely in winter, mainly down the west coast and into west Central Scotland.

Kittiwake There are two colonies Geugasgor on Canna and Eusabric on Sanday. The main colony at Geugasgor has increased significantly, at an average rate of 2.9% pa. (n 12, r 0.87) since 1962 from 400 to a maximum of 685 nests. The smaller Sanday colony has increased significantly over the same period at the apparently faster rate of 5.3% pa. (n 15, r 0.94), from 120 to a maximum of 341 nests. Since 1975 the rate of increase appears to have slowed down. This is comparable with the national trend, which showed an average rate of increase of 2% pa. between 1969 and 1979 (Coulson 1983). This overall figure masks regional variations, as some areas, such as west Scotland, showed a decrease which was particularly marked between the 1974 and 1975 breeding seasons.

Guillemot Since 1974 the ten sub-colonies counted most years (Swann and Ramsay 1983) have indicated rates of increase between 10 and 16% pa. Some colonies remained stable, other increased at up to 14% pa. and several new sub-colonies were established. Between 1974 and 1983 long established sub-colonies significantly increased at 10.8% pa. (n 9, r 0.96), whilst colonies established since 1974 increased significantly at the even faster rate of 39% pa. (n 8, r 0.93). These rates of increase are similar to those found in other east coast and northern colonies (Wanless et. al. 1982, Stowe 1982, Harris and Galbraith 1983). An analysis of ringing results for this species has already been published (Swann and Ramsay 1983).

Razorbill Between 1974 and 1983 our 'nest' counts showed a significant rate of increase of 9.1% pa. (n 8, r 0.8). This mirrors similar increases at other west coast, east coast and northern colonies (Wanless et. al. 1982, Stowe 1982, Harris and Galbraith 1983). Young and adults disperse quickly from the island during July. First year birds move south to wintering areas around Brittany and the English Channel, with a few reaching the Mediterranean, one as far east as Tunis. Immatures and adults winter further north in the English Channel and southern North Sea. Birds return to Canna from their second year and start breeding in their third year or older.

Black Guillemot Ten pairs in 1933 had increased to 17+ pairs by 1961 and to 25 pairs in 1974. Counts of individual birds between 1974 and 1983 showed a significant increase of 12.8% pa. (n 10, r 0.9). Few comparative counts for other areas are available, but numbers have declined on Foula since the early 1970's (Furness 1981) and on Aukerry, Orkney (A.D.K.R.).

Puffin We estimate the island population as of the order of 1000 pairs and probably fairly stable. Decreases which took place on the stacks (probably due to severe erosion) are being compensated for by increases on the grassy slopes at Geugasgor.

Discussion

Our results show that the populations of most seabird species on Canna appear to be in a very healthy state. Shag, Guillemot, Razorbill and Black Guillemot populations are all continuing to increase and, with the possible exception of the last, are following national trends. The populations of the *Larus* gulls and Kittiwake, after undergoing major increases, are now increasing only slowly or have stabilised at fairly high levels. Again this appears to fit national trends. Both Manx Shearwater and Puffin seem to be maintaining stable populations whereas the Fulmar, having undergone major increases, has now, against national trends, stabilised and even declined, though peculiar local factors may be responsible.

Breeding success for the two species monitored (Manx Shearwater and Shag) also appears to be high, again reflecting the healthy state of these seabird populations.

It is important that this monitoring work continues. Many seabird colonies in the Northern Isles and on the east coast are already being monitored but Canna is perhaps the only colony in northwest Scotland that is being regularly checked. In the past differences have been detected between west coast seabird population changes and North Sea ones (Coulson 1983,

Harris 1976), and it is only through continued monitoring that any such variations in the future will be detected.

Acknowledgments

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Summary

Details are given of seabird counts on Canna between 1969 and 1983. In addition the breeding success of Manx Shearwaters and Shags has been monitored since 1973 and 1976 respectively. Comparisons with data from other colonies suggest that the seabird populations on Canna are currently in a very healthy state with many having undergone major increases in numbers. Brief details are also giving of the seabird ringing programme.

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Notes on the Collared Dove in South-east Sutherland

D. MACDONALD

Introduction

Apart from a nest predation study in 1976 (Macdonald 1977), the following notes record mainly random observations of the Collared Dove from its first arrival at Dornoch, South-east Sutherland, in April 1964 until the end of the 1983 breeding season. By 1966 numerous doves frequented Dornoch gardens and a large colony was established at Pitgrudy Farm, 1½ km. north of Dornoch, where the farm buildings are sheltered on three sides by small spruce *Picea* plantations, which provide an ideal habitat for the species.

By the early 1970s a flock of 60 was quite a usual sight but in recent years flocks of more than 20 are seldom seen. These figures suggest that a considerable decrease has taken place but whereas during colonisation the doves were concentrated in only two or three localities they are now widespread throughout the area.

Plumage Buffish coloured doves were observed on three occasions, and in the 1979 breeding season a female was paired with a normally plumaged male. It is possible that these birds might have been crosses with the Barbary Dove but it appeared evident from close observation of their posture and behaviour that all were colour variants of the Collared Dove.

Voice In the breeding season the male has, in addition to the normal trisyllabic version, a distinctly lower toned and slower tempo song, which does not appear to be mentioned in the literature. It is delivered only from the nest-site area and appears to be confined to the nest prospecting and nest building period. This variant is uttered with monotonous frequency and on rare occasions can be heard up to 60 times in succession.

On three visits made to a nest in May 1974 the incubating dove flew off uttering a series of low 'kekking' notes reminiscent of the louder chatter of a small falcon. On no other occasion was a flushed dove heard to call in this manner.

Food Grain, seeds and poultry food were the main items seen to be eaten in the Dornoch area and on two occasions doves were flushed from heavily fruited elder trees *Sambucus*. At the bird table they are voracious eaters and will gobble up almost anything except, perhaps, meaty items.

Display and courtship The Collared Dove, like several other



PLATE 8. Work Parties on the Isle of May

a) Outside the Lookout in 1934—W. B. Alexander, E. V. Watson, Donald Watson, Frank Elder & Archie Bryson (l to r)

R. M. Lockley

b) Gull cull team 1970—Nancy Gordon, Tony Colling, Dave Hollands, John Young, David Grant & Frank Spragge.

N. J. Gordon





PLATE 9. Much of the Thrift which carpeted the May in the 1930's was destroyed when gull numbers were at their peak, but it is now recovering.

Upper — *G. M. Cowie*
Lower — *N. J. Gordon*





PLATE 10. Some aspects of the island have changed little over the years.

a) The approach to the Low Light

Tom Weir

b) The Low Trap—erected in 1934 and still going strong

R. M. Lockley





PLATE II. Nest of the Mourning Dove on board ship at Montrose (p. 51).

Chris Christie

pigeons and doves, has a particularly arresting display flight. Selous (1901), describing the very similar display flight of the Turtle Dove, states "This is a beautiful thing to see, and especially in the early morning of a clear, lovely day". The flight may have both nuptial and territorial significance as it sometimes appeared to be set off by the sighting of a dove, other than its mate, flying in the vicinity.

Two distinct approaches were observed leading to copulation. Usually it was initiated when a pair perched close to one another began to mutually preen each other's head and neck, or sometimes the female alone did so to the male, whereupon without further ceremony coition took place. On one occasion, however, the female had to solicit the male three times before he responded. A distinctly more elaborate ritual was witnessed on three occasions. Each time the pair were perched three or four metres apart when the male suddenly began to coo, then pouting out his breast and bobbing his head up and down he slowly waddled up to the female and coition followed.

Nest building and the nest Nest building was observed only once. On two days that the pair were watched closely no building took place later than 1115 hrs. Bockenski (1958), who watched a nest being built in Poland, states that on three days the work began early in the morning and finished before 0900 hrs., the birds spending the rest of the day, as they did at Dornoch, flying about and cooing near the nest-site without paying any attention to it.

Fifty nine nests ranged in height from one to 7½m. with an average of 3½m. Most were sited at the junction of a horizontal branch with the tree trunk but a few were placed a few centimetres out from the trunk. Nests were built in the following trees or shrubs: spruce *Picea* 40; cypress *Cupressus* 4; holly *Ilex aquifolium* 3; yew *Taxus*, Scots pine *Pinus sylvestris*, laurel and ivy *Hedera helix* on tree trunk, 2 each; beech *Fagus sylvatica* and hawthorn *Crataegus*, 1 each. Two failed nests, the contents of which were not ascertained, were built in different years on a concrete ledge at 5m. under the roof of an open fronted shed. This site was in open country adjacent to the shore and about 400m. from the nearest trees.

The clutch and incubation Laying of first clutches began in mid April and no fresh clutches were found after mid September. Of 49 nests found at the incubation stage 43 held 2 eggs and the remaining 6 singles. Nests with single eggs, however, may earlier have had full clutches, as Collared Doves are notorious for dislodging eggs when rising from their flimsy platform nests. The incubation period at two nests was found to be 14 and 15 days respectively. Skutch (1976) refers to

several species singing while incubating and in 1968 an incubating bird was heard cooing on two separate occasions.

Nestling and fledging periods The nestling period was ascertained at only two nests and in each case was 18+ days. Collared Dove fledglings tend to return to the nest after fledging (Marchant 1963). Accordingly, when fledging is imminent, visits to a nest must be made at least twice daily as otherwise an incorrect assessment of the nestling period can result. At one of the nests studied both nestlings had left the nest between 0830 and 1230 hrs. on 6th October, but both were back on the nest at 1500 hrs. on 8th October. Distraction display was witnessed on two occasions when the young were still in the down stages. Each brooding adult when flushed dropped to the ground, where it fluttered along with half open wings for a distance of about 15m.

After leaving the nest fledglings usually perched close by for several days. At one nest-site the two fledglings remained in the near vicinity until the 25th day after fledging (Macdonald 1967), when they suddenly became quite wary and were flying freely with their parents on the following day. The black half collar was first observed on a fledgling on the 23rd day after fledging.

Predation Out of a total of 57 nests only 16 produced at least one fledgling, and of 56 young known to have hatched only 26 fledged. Of the other 41 nests 31 were predated, 2 were deserted, the nestlings were found dead in 4 and the outcome of the remaining 4 was unknown. In a survey of the Pitgrudy Farm colony in the 1976 breeding season (Macdonald 1977) it was found that clutches laid prior to mid June were much more heavily predated than those later in the season and a similar trend was noticeable in garden nests at Dornoch. Carrion Crows at Pitgrudy Farm and Jackdaws at Dornoch appeared to be the most likely predators, as there was a marked increase in the success rate of nesting doves after these two species had completed their breeding cycle.

Behaviour outwith the breeding season A regular watch was kept on a pair of doves which frequented my garden at Dornoch in recent winters. Groups of doves often feed amicably together but this pair would not tolerate the intrusion of any other dove in the garden. Feeding stints were rather intensive, usually lasting from 10 to 15 minutes and rarely exceeding 20 minutes. They drank frequently. Rest periods were prolonged, ranging from 25 to 105 minutes and consisted of long quiescent spells interspersed with preening sessions.

Sunning Kennedy (1969) includes the Collared Dove in a

list of species which perform sunbathing. No sunning was observed by any dove at Dornoch but on 17th July 1970, a warm but cloudy day following three cool, sunless days, a dove was seen at 1020 hrs. lying on a lawn in a partially tilted posture. During the next 25 minutes the bird frequently moved a pace or two forward, each time changing over and tilting on to its other side. It was always alert, constantly turning its head from one side to the other and sometimes picked up something from the grass. On four occasions it lifted its uppermost wing over its back for two or three seconds, and before walking away it preened for a few minutes. It is, perhaps, significant that Stainton (1982) states, "sunning may always be habitual in the case of Galapagos Doves Nicolai (1962): as they regularly adopted sunning postures around noon in the winter, whether the sun shone or not, particularly after long periods without sunshine".

Roosting Hudson (1965) states that communal roosting is a regular feature outside the breeding season. That may be so where there is a colony of doves but those haunting Dornoch gardens were found roosting singly or in twos on several occasions. The Collared Dove retires early for the night and often comes to roost an hour before dusk.

Summary

Random notes are given on details of population, plumage, voice, food, display, breeding, predation, sunning and roosting of the Collared Dove at Dornoch, South-east Sutherland.

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Short Notes

Transportation of Mourning Dove nest to Montrose

On 27 September 1983 I was given two small slightly glossy, white eggs for identification at Montrose Museum. The eggs had been found in a flimsy twig nest on a steel structure on board the 'Euroclipper' which arrived in Montrose on 21/22 September from Rotterdam. Upon making enquiries at J. M. Piggins, Stevedores, I discovered that the steel struc-

ture was originally shipped from Houston, Texas, U.S.A. on the 'Finnhawk' to Rotterdam where it was transferred to the 'Euroclipper'.

The eggs and nest (see photograph) were undoubtedly those of a dove *Columbiformes* and by using Bent (1932) and Goodwin (1970) I identified them as belonging to the Mourning Dove *Zenaida macroura carolinensis* Linné 1758. Both authors refer to the occasional use of buildings by nesting Mourning Doves. One of the eggs was broken and revealed a half-grown embryo. The other egg was blown and is now in the Montrose Museum collection. It measures 28.5 x 21.5mm and compares well with an average of 47 eggs measured by Bent (1932) of 28.4 x 21.5mm.

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Scottish Storm Petrels in Iceland

There is much evidence to suggest that British Storm Petrels can be separated into two classes: (a) adult birds of breeding age which are "imprinted" on a colony, and (b) wandering juveniles which may be attracted to tape-recordings of the burrow call played on shores away from colonies. The wanderers arrive in northern waters from the end of June onwards and range widely, visiting, but not occupying, colonies (Mainwood 1976. Furness and Baillie 1981, Fowler et al. 1982). For example, Storm Petrels ringed in Shetland have been recaptured as far afield as Ireland, the Hebrides, St Kilda, the Isle of May, Faeroe and the Lofoten Isles, Norway. Movements may be very rapid: one day to Orkney and five days to St Kilda is not unusual.

The capture by the 1983 Brathay Expedition on the south-east of Iceland of four Storm Petrels previously ringed in Scottish waters can, therefore, hardly come as a great surprise. The recoveries are, nevertheless, of considerable interest, not merely because they are the first Icelandic reports of British ringed Storm Petrels, but because they clearly demonstrate that wandering Storm Petrels range throughout the eastern half of the North Atlantic in summer, presumably prospecting for nest sites; a trans-Atlantic recovery may only be a matter of time.

Two of the birds were ringed by the Leicester Polytechnic Shetland Expeditions in 1982 and 1983; one by Fair Isle Bird Observatory in 1981 and the other by the Clyde Ringing Group in 1983. Tape recordings were involved in the capture and the recapture of the birds.

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J. A. FOWLER and R. SWINFEN

Dartford Warbler in Berwickshire

On 18th May 1983, while looking at migrant passerines that had arrived overnight in light easterly winds at St Abb's Head, Berwickshire, my attention was attracted by a quiet Whitethroat-like song coming from the depths of a hawthorn/bramble thicket. A small *Sylvia* warbler, dull-red above and blue-grey below with some white in the moustachial area, suddenly appeared in the open. Initially the possibility of a Subalpine

Warbler occurred to me (there had been one at Fife Ness earlier that week) but this thought was soon dispelled when I realised that the colours were too dull and that there was no distinct moustachial stripe. The small flecks of white feathering on the throat immediately suggested a male Dartford Warbler.

Description Upperparts uniform slaty-grey from crown to rump, including the wing-coverts and primaries; tail blackish-grey; throat, breast and upper abdomen a dull burgundy becoming lighter towards the lower abdomen and flanks. The lower abdomen and ventral area was a dirty whitish colour. The dull red throat was lightly flecked with a very bright, contrasting white, there being more flecks in the lower lores and moustachial area. The bright red eye-ring contrasted well with the iris and head colouring. The upper mandible and the last 1/3 of the lower mandible were dark brown, the basal 2/3 of the lower mandible being light brown. The legs were dull brown. The tail was relatively long compared to other *Sylvia* warblers.

The bird was an inveterate skulker and moved rapidly within and between the hawthorn and gorse scrub. I returned two hours later with a recording of Dartford Warbler song and was pleased to find that the bird immediately responded to it by singing more loudly and moving towards the tape recorder. I then made a recording of the response using a parabolic reflector and found that the warbler's response was even greater, the bird approaching within 1 m. under the cover of thick gorse bushes. The song was a Whitethroat-like jumble of notes; the snatches of the song lasted approximately one second but contained up to a dozen separate notes. The song was monotonously repeated about every 2-3 seconds. The bird occasionally produced a rather melodic, harmonica-like scolding. The song at all times was quiet, only audible within 20 m.

Although the Dartford Warbler is a well known British bird it was surprising to find that it had never before been recorded in Scotland. The resident status of Dartford Warbler populations clearly makes an extra-limital occurrence unusual. The definite lack of brown pigments on the St Abb's bird and the relative clearness of the red and blue-grey colours suggests that it was probably not from the British population but rather from the nominate continental subspecies. This would tie in to some extent with the arrivals of vagrant species on the east coast the previous week; these included Little Egret, Golden Oriole, Subalpine Warbler and an unidentified scrub warbler, either Sardinian or Orphean.

R. D. MURRAY

Two female Hen Harriers at the same nest

On 18 June 1983, on moorland in the West Mainland of Orkney, I flushed two female Hen Harriers from the same nest. The nest contained 5 eggs and was in the characteristic vegetation favoured by the species in Orkney, with soft rush and heather co-dominant. As I was less than 5m from the nest when the birds rose I could be certain that both were females and neither was a first-year male. I could not be certain, however, that one bird had not risen from outside the nest rim. I revisited the site on 4 July, with Brian Ribbands, to check its success. On this occasion the nest was approached to within 3m before the birds took flight and there could be no doubt that both rose together from the nest platform. The nest still contained 5 eggs which were found to be addled. As the nest had failed anyway, we remained close to the site in an attempt to identify the wing-tags both birds were carrying. One bird was 9 years old and the other 3 years old; they were unrelated. No male was seen on either visit.

The site was not examined again until 27 July, when all the eggs had disappeared and there was no sign of females in the vicinity.

These observations are consistent with what Newton (1979, Table 4) termed 'Type A' polygyny and, as such, represent the second example of this type of polygyny amongst the Orkney Hen Harrier population. Newton's 'Type B' polygyny (where separate nests occur close together in an area that would normally be occupied by one pair) occurs occasionally in Orkney, while 'Type C' polygyny (where separate nests occur far apart in areas that would normally be occupied by separate pairs) is frequent. The previous example of 'Type A' (Picozzi 1983) referred to different individuals at a site some 23 km to the south-east, in Orkney's East Mainland, in 1981. In both that and the current example one bird was old (8 & 9 years) and the other much younger (3 & 4 years).

I should like to thank N. Picozzi for his constructive comments on an early draft of this note.

E. R. MEEK

References

- NEWTON, I. 1979. *Population Ecology of Raptors*. Berkhamsted ■ PICOZZI, N. 1983. Two hens, but a single nest: an unusual case of polygyny by Hen Harriers in Orkney. *Brit. Birds* 76: 123-128.

Kingfisher attacked by Magpie

As I was walking along Blackford Glen Road, Edinburgh on 3rd January—a bright and frosty but very windy morning—a Kingfisher flashed up the Braid Burn, which runs along by the road. It disappeared under the bridge and culverts at the local authority road works; but, a few yards farther on, I discovered that a Magpie had pounced on it from an overhanging tree and was attacking it in its claws on the far side of the stream. As I moved forward, the Magpie released its hold, and the Kingfisher flew very uncertainly upstream, still pursued by the Magpie. They disappeared out of sight below the bank, but seconds later the Magpie re-appeared on the road without the Kingfisher. One can only assume that the prey escaped by flying under the next bridge, or possibly it plunged or fell into the water, where it would be swept down by the current, which was very strong after rain. In any event, it seems doubtful whether the Kingfisher would survive, as it seemed to have a trailing wing. I searched the banks of the stream in both directions, but could find no trace of it.

MARGARET MOWAT

Letter

Dear Editor,

Crested Tits on Deeside

I was interested in Alan Knox's recent article on this subject (SB 12: 255). The 1939 record quoted by Baxter & Rintoul refers to my late father, and the 1950 record quoted by Campbell (1958) to me. I had crossed the Cairngorms in autumn and was lying in the heather near the Linn of Dee when I heard what sounded like the high-pitched note of the Crested Tit. A search revealed nothing, but about an hour later I distinctly heard the unmistakable trill, and shortly thereafter had a good view of two Crested Tits in the large spruces. I recall a subsequent discussion with the late Evy Baxter in which she agreed with me that Crested Tits would be more likely to have spread from Speyside directly over the Lairig Ghru than by following the circuitous route down the Spey, through the woods of Moray and Banff, and up Deeside.

The Crested Tit population in Speyside is subject to considerable variations, and after a hard winter can be reduced to a fraction of its peak numbers. In good years, however, it is surprising to see fair numbers in the stunted Scots pines of the uppermost fringes of the forest. It is not difficult to envisage that from these areas, either by natural outward spread, or, since Crested Tits feed not only in trees but also in the heather—sometimes at an appreciable distance from the trees—, swept southwards by northerly gales over the hill or through the Lairig, small numbers might occasionally reach the sanctuary of the Deeside woods. What I agree is more puzzling is why they have not become successfully established in Deeside.

J. P. GRANT OF ROTHMURCHUS

Fieldwork Reports

These brief reports have been submitted by recipients of
SOC Endowment Fund grants

East Scotland Mute Swan Study In 1983 a complete census of Mute Swans in the study area was undertaken by air survey at two critical times of year: the breeding season and the moult period. The former coincided with the national swan census and allowed the accuracy of the air census to be checked against ground counts. About 450 adult birds were recorded in spring and some 635 in autumn, an increase during the moult period of over 40%. During autumn most of the swans were concentrated in two moulting flocks, and at the end of July attempts were made to round up and capture both these flocks. As a result 427 birds were caught in 2 days: 181 at Loch of Strathbeg and 246 at Montrose Basin. Colour-ringing at both sites should reveal their dispersal pattern; already several sightings have been reported from further south. Blood samples were collected, from broods of young as well as moulting adults, for estimation of lead levels. Analyses of the first batch of samples suggest that lead levels in blood are generally low enough not to cause serious concern in this area, although isolated cases of high lead levels apparently occur and need further investigation.

CHRIS J. SPRAY

Long term seabird studies on Canna Three visits were made to the island during 1983, in May, July and August, enabling us to conduct our normal censusing and ringing programmes. Most seabirds had another excellent season. In our sample areas Guillemots had increased by 9.3% and Razorbills by 4.6% confirming that Canna birds were little affected by the January/February 1983 wreck as the relatively few ringing recoveries had suggested. Gulls also had a good season, with Herring Gulls maintaining their high numbers with 1151 pairs (1212 pairs 1982). They also had good breeding success with 76.8% of nests in study areas producing young. Lesser Black-backed Gulls increased slightly to 46 pairs and 18 pairs of Common Gulls was the highest we have recorded. Great Black-backed Gulls remained stable with 65 pairs, as did Kittiwakes with 982 nests. Shags maintained their high numbers with 1498 nests (1507 nests 1982). Breeding success was only average with 1.8 young fledged per pair from our 57 study nests. Fulmar numbers were still low with 480 occupied sites—well below the c.650 counted in the late 70's. After two bad seasons, including last year's almost total failure due to rat predation, Manx Shearwaters did much better with 0.68 chicks fledged per pair (based on 38 observation burrows). This was probably aided by

the use of rat poison (supplied by the R.S.P.B.) in the colony during and prior to the breeding season.

4500 birds were handled during the ringing programme, including 2535 Guillemots, 735 Shags, 450 Herring Gulls, 304 Razorbills and 201 Manx Shearwaters. In addition 380 Guillemots and 200 Herring Gulls were colour ringed and observations were made on birds colour ringed in previous years. Food samples were again collected and measured from both Guillemots and Shags. The former were found to be eating large sand eels and sprats. About 60 chicks and 60 breeding adult Guillemots were weighed and measured for comparison with other colonies.

Our 1981-82 Canna Report has now been published and copies are available in the SOC Library or can be purchased (price 50p) from R. L. Swann, as can our recently-produced Birds of Canna (also 50p).

R. L. SWANN

Buzzards in Glenurquhart This study was started in 1975. The number of occupied territories tends to remain fairly stable from year to year, varying between 20 and 23 pairs, but not all pairs lay each year. 1983 was an average year: 16 (76.2%) pairs laid with an average clutch size of 2.08. This compares with the 1975-83 averages of 76.4% laying and clutch size of 2.38. In 1983 13 nests were successful and fledged 14 young, giving an average of 0.88 young fledged per breeding pair or 1.08 per successful pair (c/f long term averages of 1.8 and 1.48). This lower than average figure was mainly due to higher than normal chick mortality. Only one nest fledged two young; in all other nests the smallest young died, presumably a sign of food shortage. Buzzards in Glenurquhart nest at fairly high densities but food often appears to be a problem due to the lack of rabbits. They feed mainly on small mammals (such as voles and shrews), birds and reptiles. There is evidence that the cold late spring of 1983 reduced the amount of such food available to the Buzzard.

R. L. SWANN

Status and breeding ecology of Merlin in Grampian During 1983, work was continued in the original study area. Two new areas were looked at in detail and this resulted in the best year for coverage so far. Many individuals are reporting sightings and 10 SOC members are now contributing to the study. Altogether 57 of the known or suspected nesting areas were checked and signs of occupancy were found at 48 of these. Eggs were laid at 21 sites and 13 of the 14 sites checked late in the season all had at least one young on the wing. The atrocious weather during April and May in the North East of Scotland resulted in many sites being deserted in June. The pairs still present after the bad spell did reasonably well and 36 young were ringed. The young in 4 broods were weighed and measured until they left the nest, in a continuation of last year's attempt to establish reliable sexing. Pellets and prey remains were collected on most visits and these are being analysed. It is planned to continue the study during the next few years.

GRAHAM REBECCA

Heron studies in East Scotland The colonies studied in 1983 were: Angus—4 (Brechin, Carnoustie, Lintrathen, Glen Isla), Fife—4 (Kingsbarns, St Andrews, Tentsmuir—2), Kinross—1 (Loch Leven), Perthshire—5 (Bridge of Earn, Dunning, Bankfoot, Pitlochry, Glen Shee). This was 1 colony down on 1982. This colony was deserted as a result of shooting during the 1982 season and the new site was not found in 1983.

No season goes by without at least one of our study colonies being

affected by timber operations. This year it happened at Lintrathen, where nests were either destroyed or deserted due to clearing and thinning of windblown trees. The main problem was the timing of the work which coincided with the wet cold spring weather just after the chicks had hatched and when they were most vulnerable to chilling. Only 2 pairs were successful, and an increase in breeding pairs at the Glen Isla colony may have been due to a shift of birds between the 2 colonies. Overall, breeding numbers were much the same as in 1982. Brood sizes were down on average due to the cold wet spring. Another facet of the poor spring weather was the high number of early failures, however many of the birds laid repeat clutches and were successful in rearing broods.

A total of 296 young were ringed, which was down on the 1982 total of 320 but still a high percentage of the BTO annual total, currently running at c.1,000. Tagging of young from selected colonies was again continued, in conjunction with Mick Marquiss of ITE. We still have to locate any of our previously marked birds breeding in the study colonies, although this has not been helped by high mortality in previous winters. Hopefully a mild winter will allow a higher survival of young birds so that more are available for recruitment into the colonies.

K. BROCKIE, M. NICOLL

Status and breeding biology of Yellow Wagtails in Clyde During summer 1983 parts of Ayrshire and Lanarkshire were intensively surveyed for breeding birds. The survey was incomplete due to the late spring delaying and depressing territorial behaviour, and the labour-intensiveness of searching large areas. It is hoped to continue for another one or two seasons to achieve complete coverage of suitable habitat in Lanarkshire. A total of 52 pairs was located in 1983: 27 in Ayr, 23 in Lanark, and single pairs in Dunbarton and Stirling. Most Ayrshire nests were in hay fields, whereas barley fields were the preferred habitat in Lanarkshire. Breeding success is being studied in relation to habitat selection, agricultural changes, climate and other factors. An area of 400 ha. of north Ayrshire farmland, which held a concentration of 15 territorial males in 1983, has been chosen as the main study site. Pairs usually fail in silage fields, and have to find new territories in hay fields which may already hold breeding birds, resulting in intensified competition. Some males remain territorial after successfully rearing young, and may attempt to acquire a second mate in the same season. As an aid to the study of breeding biology, birds have been ringed with individual colour codes: 73 nestlings and 9 full-grown birds in 1983. Two foreign ringing recoveries were interesting, both birds on return migration through the Western Sahara in spring 1983. A full report of the survey will be deposited in the Waterston Library, and an account of the species' historical and present day status in Scotland is being written up for publication.

IAIN GIBSON

Breeding Dunlin on South Uist Two visits were made to a damp machair grassland on the Army Ranges at Loch Bee, South Uist, to continue a study of breeding Dunlin started in 1981. The first visit between 23rd and 25th April revealed several small parties of adult Dunlins back on the breeding grounds with some birds already in song display. Attempts to estimate the large Lapwing population were frustrated by the inclement weather. During the period 25-30 May a more comprehensive study of Dunlin was conducted, involving intensive nest searches and the ringing of breeding adults and chicks. In a study plot of 6.7 ha. a minimum of 25 pairs of Dunlin bred (23 nests found). Occupied nests averaged 45 metres apart and showed a strong tendency to clumping, as in previous

years. The nest density recorded suggests a population in excess of 400 pairs on the Loch Bee machair—an outstanding concentration. A disturbing feature of the 1983 season was the unusually high failure rate compared to the previous two years. This was mainly due to a small number of Black-headed Gulls specialising in wader nest predation. Their effect on Dunlin was locally severe; during the 6 day study period, 20 (59%) of 34 known nests were predated by this gull. Adult Dunlin (14 males and 15 females) were nest-trapped for biometric studies. Nine of these birds had been caught previously as breeders in 1981 or 1982. Further visits to this outstanding wader community are planned in future years to monitor long-term population trends.

B. ETHERIDGE

Golden Eagles in Grampian region During the 1982 survey a pair of birds was counted with confidence if an occupied nest was found. If birds were present but only empty nests could be located, then doubts set in. Was the pair just not breeding that year, or had eggs been laid but then stolen? Or had the birds flown in from an adjacent range? By the end of the 1982 survey there was still some doubt about the breeding status of 5 ranges in Grampian Region.

In February and March 1983 these 5 ranges were visited regularly. During this period, birds can be very conspicuous as they display or build up old nests, and it is the best time to find out what is happening in an area. In one range, thought to have been occupied by a separate but non-breeding pair over the last few years, the birds were seen, after much watching, to be refurbishing a small obscure eyrie, previously unknown but clearly several years old. So it is possible that the birds did breed after all in 1982. In 1983 eggs were laid in this newly-found eyrie, proving that the birds did constitute a separate breeding pair.

In the other 4 ranges, adults were seen regularly in each, but only one breeding pair was found. The other adults were considered, with some confidence, to be from adjacent ranges, with birds moving over greater distances than had been thought likely. Without positive identification features (e.g. wing tags) there is of course always the possibility that a pair is super-secretive and that a nest has been overlooked.

The work described here was a small part of the monitoring of eagles in Grampian and east Tayside carried out by the North-East Scotland Raptor Study Group in 1983, and summarised as a Short Note in *Scot. Birds* 13: 24-26.

SANDY PAYNE

Waders of rocky shores in northern Scotland The second part of the two-year project to survey the waders on the coasts of the Orkney Islands was completed during December 1983/January 1984 by the Tay and Orkney Ringing Groups. Nineteen islands have now been visited and practically all rocky and sandy shores were surveyed at low tide; some sections of cliff were omitted from the survey. Over 50,000 waders were counted, the most abundant species being Curlew (18,000), Redshank (7,000), Turnstone (6,000) and Purple Sandpiper (6,000). Relatively large numbers of Ringed Plovers (1,600), Sanderlings (860) and Bar-tailed Godwit (930) were also found. For practically all species the numbers counted represent only a part of the Orkney population, for most species use grass fields for foraging as well as the shore. Purple Sandpiper and Sanderling were the only species not seen feeding in fields. Also, repeat counts of a section of shore showed that day to day variations greatly affect the counts of Curlews, Oystercatchers and Redshanks, but these variations are small for Purple Sandpipers and Turnstones.

RON SUMMERS

Breeding waders in the Outer Hebrides Between April and July 1983 the Wader Study Group and the Nature Conservancy Council jointly surveyed the breeding waders on 131 km² of machair on South Uist, Benbecula and North Uist. Over 12,000 pairs were located by the transect method, comprising 511 Snipe, 3451 Lapwing, 2071 Oystercatcher, 2038 Dunlin, 1974 Redshank, and 2116 Ringed Plover (all pairs). These figures are probably under-estimates, and are certainly so in the case of Snipe. Species' distribution varied greatly: Ringed Plovers were abundant on the drier cultivated and fallow land while Dunlin, Redshank and Snipe preferred wetter grasslands and marshy areas. Detailed distribution maps were prepared as an aid to assessing the conservation value of different areas, and to serve as a baseline against which to measure the effects of any change in agricultural practices resulting from the EEC's Integrated Development Programme.

The results of the survey confirm that the mosaic of machair habitats supports a unique community of breeding waders at a greater overall density (90 pairs/km²) than has been recorded in any other part of Britain. The densities of Ringed Plover and Dunlin are unrivalled elsewhere in Britain; comparison with the results of the 1973-74 survey of Ringed Plovers shows that the area studied probably supports about 25% of the British population. The Redshank population is also notable, with breeding numbers comparable to the total of 2104 pairs found in damp grasslands throughout England and Wales in 1982. Future near-annual surveys of selected areas are planned, starting in 1984.

This survey was funded by grants from SOC, British Ecological Society, NCC, WWF, BOU, BTO and RSPB. A short report on the background to the survey, methods used, results, future plans, and publications to date may be obtained from Wader Study Group, c/o G. H. Green, Windy Ridge, Little Comberton, Pershore, Worcs, WR10 3EW.

G. H. GREEN

Breeding waders of Scottish agricultural land 1983 was the second and final year of field-work for the breeding wader survey. Though completed cards have only recently stopped coming in, it is possible at this early stage to evaluate the efforts made in relation to the targets set. After the first field season (1982), our main aims were to extend coverage in the more intensively surveyed south and east and also to improve sample sizes in the more remote west and north. In both aims we have been successful, as the following table shows:

Region	Coverage (km ² surveyed)	
	1982	1982+1983
south-west	99.8	177.4
south-east	87.5	103.2
north-east	76.8	94.3
south-west Highlands	9.1	22.6
northern Highlands	15.4	40.3
western islands	10.1	17.1
Orkney/Shetland	23.7	41.4
		<u>496.3</u>

A full analysis of the data will appear in *Scottish Birds* but we would like to take this opportunity to thank all of those dogged SOC members who gave up their valuable time to help make this survey possible.

HECTOR GALBRAITH & BOB FURNESS

Reviews

Owls of Europe by H. Mikkola; T. & A. D. Poyser, Calton, 1983; 397 pp.; 75 b.w. photographs; 8 colour plates; £16.80.

This is an excellent book that fills a major gap in the ornithological literature. It includes all European owls as well as four species that occur round the fringes. Each species is given separate treatment in highly detailed accounts covering all aspects of the species biology. The author has undertaken the formidable task of searching out and consulting nearly all of the European literature on owls and for the first time an immense amount of fascinating information is made available that formerly was inaccessible to most British ornithologists. In Sweden and Finland, in particular, there has been a vigorous interest in owl ecology and the accounts of species such as the Great Grey Owl and the Eagle Owl make absorbing reading.

The text is lavishly illustrated with a superb collection of black and white photographs by a variety of photographers and a set of colour plates by Ian Willis. Some of the photographs are simply breathtaking, especially those by E. Kemlitt, showing a Great Grey Owl hunting and those of Barn Owls in flight by Donald Smith.

With so many bird books coming on to the market in a seemingly endless flood one has to be highly selective but this book thoroughly deserves the highest ranking on any shopping list.

I. R. TAYLOR

Enjoying Ornithology edited by Ronald Hickling; T. & A. D. Poyser, Calton, 1983; 296 pp, 39 maps and text figures; £13.00.

The title of this book really gives little indication of its content. Note "Enjoying Ornithology" not "Enjoying Birds"—so it is not in the line of Lord Grey or Canon Raven. It is in effect a *festschrift* from various pens in honour of the demi-centenary of the British Trust for Ornithology. It is not, we are told, a history of the B.T.O.—but it most certainly is, and a great deal more besides: history and personalities from the early days onwards, details and descriptions of all the activities of the Trust from single species census to the greatest co-operative effort of all—The Atlas.

Many may associate the Trust mainly with ringing and migration—a very Scottish topic perhaps in view of early work at Aberdeen University, Fair Isle and the Isle of May. Ron Hickling gives credit to all and reminds us that Ken Williamson's theory of migrational drift was anticipated by over thirty years by the "Good Ladies"—the Misses Baxter and Rintoul. Nothing is static in nature and even the most casual observer of birds must be aware of change, such as the appearance of the Collared Dove or the disappearance of Corncrakes. Bob Spencer's brilliant contribution is in itself a good reason for buying the book—a scholarly dissertation on changes in species, numbers and distribution.

The grand finale is a sort of ornithological Guinness Book of Records, of facts and figures drawn from ringing recoveries and other B.T.O. investigations: the Arctic Tern which travelled 18,000 km. seems old news, but what of the Great Tit which clocked up 1446 km. or the Manx Shearwater which was known to be at least 29.92 years old?

This slim volume, unadorned by plates may look expensive at £13 but it is packed full of meat and is undoubtedly recommended reading for anyone with more than a casual interest in British Ornithology.

IAN DURANCE PENNIE

Fair Isle's Garden Birds by John Holloway; Shetland Times, 1984; 159 pp; 60 col pl; drgs; £18.

The tongue-in-cheek title includes all the vagrants seen from John Holloway's garden on Fair Isle between 1978 and 1983, and there are a lot of them in his garden list of 177. Together with some commoner migrants they provide the first part of this collection of his paintings, coming in any order as he saw the birds. The brief description of each discovery shares something of his delight and excitement in a text characterised by enthusiasm rather than by Latin names. The second section trawls through an even bigger selection of rarities seen elsewhere on the island, particularly warblers and buntings, and the final part brings together bird memories and anecdotes from each of the families on Fair Isle.

John Holloway's pictures are detailed and stylised studies without backgrounds of some eighty species, with a few smaller sketches. Their style is part field-guide (the pages are 8 by 6 inches) and part art-book. It is a pity that the printing does not always do full justice to the paintings, especially at such a price, but the book is a splendid surprise package from Pine Bunting to Red-flanked Bluetail to Pallas' Grasshopper Warbler and the rest.

J. M. S. ARNOTT

A Complete Checklist of the Birds of the World by R. Howard & A. A. Moore; Macmillan, London, 1980, 1984; 732 pp; new revised edn. with complete index of English names, £7.95 (limpback).

New Colour Guide to Hong Kong Birds by C. Viney & K. Phillipps; Hong Kong Government, 1983; 194 pp; incl. 77 col plates; map; completely revised and enlarged edition of the Colour Guide to Hong Kong Birds (1979), £12.50 (limpback).

PAPERS OF SCOTTISH INTEREST Articles and reports on birds in Scotland, mainly on status and distribution, are listed here. Some biological studies are excluded, as are references from the widely available journals **British Birds**, **Bird Study**, **Ringing and Migration**, and **Ibis**. Most items listed are available for reference in the Waterston Library. The librarian welcomes copies of work on any aspect of ornithology.

North-East Scotland Bird Report for 1982. (56 pp). M. V. Bell (ed) 1983. In addition to a Systematic List there are articles on 'Birds of Cruden Bay 1968-1983', 'Toxic chemicals in Gramplan Seabirds' and 'A Year in the Bird-life of Rubislaw Terrace Gardens'.

Survey of breeding Waders on the Machair of the Outer Hebrides in 1983. In *Wader Study Group Bull.* 39: 5-29. Several authors have contributed to this preliminary account (M. W. Plenkowski, editor) of this joint Wader Study Group/Nature Conservancy Council survey. The techniques used in the survey are discussed and preliminary results given.

Patterns of population turnover in Ringed Plovers and Turnstones during their spring passage through the Solway Firth in 1983. M. Moser & M. Carrier 1983. *Wader Study Group Bull.* 39: 37-41.

Feeding strategies of the Arctic Skua at Foula, Shetland. B. L. Furness 1981. *Proc. Symp. on Birds of the Sea and Shore*, African Seabird Group, Cape Town: 89-98.

Forth Area Bird Report for 1981. C. J. Henty 1983. *Forth Naturalist and Historian* 6: 25-33. Covers Clackmannanshire, Stirlingshire and southwest Perthshire.

The decline of the Raven as a breeding species in Central Scotland. J. Mitchell 1983. *Forth Naturalist and Historian* 6: 34-42.

- Perthshire Peregrines in 1983.* (3 pp). P. Stirling-Aird 1984. Covers central and west Perthshire.
- Edinburgh Nat. Hist. Soc. Journal for 1983* (56 pp. 1984). Includes 'Forth Island Bird Counts in 1983' and a letter describing unusual feeding behaviour in a Great Spotted Woodpecker.
- North Sea Bird Club Report for 1982.* (45 pp). 1984. Includes a systematic list, a more detailed analysis of occurrences of Lapwings, Great Skuas, Gullinots, Wheatears, Chaffinches and Bramblings, etc.
- Status of Mute Swans in the Lothians.* (2 pp). A. W. Brown & L. M. Brown 1984.

W. G. HARPER

Notices

Seabird Group Conference A conference with the general theme of "Population studies and population monitoring" is to be held at Denstone College, Uttoxeter on 15-18 February 1985. The charge for full board and Conference fee is not expected to exceed £30-£40; limited funds may be available to help defray travelling costs. Offers of talks and poster presentations on the Conference theme (or other seabird topics) are invited. Those interested in contributing or attending can obtain further details from Dr J. P. Croxall, The Seabird Group, c/o RSPB, The Lodge, Sandy, Beds. SG19 2DL.

Raptor collisions with power lines The U.S. Bureau of Land Management is assembling all available information concerning collisions of raptors with powerlines and other utility lines. Actual case histories, no matter how circumstantial or fragmentary, are needed. Anyone with such information is asked to write to Dr R. R. Olendorff, US Bureau of Land Management, 2800 Cottage Way, Sacramento, California 95825 USA; a form on which to record the information will then be sent by return mail.

Ringling in the Scottish Borders In an attempt to encourage and co-ordinate ringling in the Scottish Borders, Tom W. Dougall plans to produce a short annual report in the yearly "Borders Bird Report" which covers the former counties of Berwickshire, Peebles-shire, Roxburghshire, Selkirkshire and includes peripheral 10-km. squares partly in those counties. He would be grateful for details of annual totals of fully-grown birds and pulli ringed; and of any recoveries and controls involving the region, whether birds ringed casually or as part of a research project. All contributions will be acknowledged in the annual report. Please submit them to: Ray Murray, 143 Eskhill, Penicuik, Lothian EH26 8DE.

The Scottish Ornithologists' Club

ANNUAL CONFERENCE and ANNUAL GENERAL MEETING

The 37th annual conference and 48th AGM of the Club will be held during the weekend 2nd-4th November 1984 in the Marine Hotel, North Berwick, East Lothian. The conference theme is Scottish islands, with the emphasis on the Isle of May—as 1984 sees the 50th anniversary of the Isle of May Bird Observatory. The conference programme, booking form and AGM agenda will be sent to members with *Scottish Birds* 13(3) early in September.

BRANCH MEETINGS

The dates for the first meetings of branches next winter are as follows :

Aberdeen, Borders, Glasgow—17 September
 Edinburgh, Inverness, Wigtown—18 September
 Ayr, Dumfries, St Andrews, Thurso—19 September.
 Dundee, New Galloway, Stirling—20 September

WILDFOWL COUNTS IN SCOTLAND

Please note this correction to the list which appeared in SB 13(1).

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THE SCOTTISH BIRD REPORT 1982

We apologise for the considerable delay in publishing the 1982 SBR, and hope that all subscribers will have received their copies long before this notice appears. After many years as compiler &/or editor of SBR, Roy Dennis has had to resign, due to the pressure of his work as the RSPB's Highland Officer. We thank him for the tremendous amount of work he has done over the past years.

Angus Hogg, Kirklea, 11 Kirkmichael Road, Maybole, Ayrshire, is to succeed Roy as Editor and will be starting work on SBR 1983 immediately. Alan Brown and Pete Ellis will continue to assist with compilation, and Roy will retain responsibility for all records relating to rare breeding birds, which should be sent direct to him as before.

SCOTTISH BIRDS

Copies of all back numbers of the journal and the SBR are available, although some issues in short supply may be bought only as part of a complete volume. For an up to date price list write to the Secretary.

VOLUNTEERS

Although the SOC and the Bird Bookshop now have 6 full-time and 2 part-time staff, some voluntary help from Club members would be greatly appreciated at certain times. We basically require two types of people : those who can help out at busy times in the office or bookshop, or when a member of staff is sick or on holiday (or having a baby!), and those with particular skills such as electrical, plumbing, carpentry, painting and decorating, gardening, etc. If you'd like to help and live in or near Edinburgh please contact John Davies, the Secretary.

PHOTOGRAPHIC COMPETITION

The closing date for the 1984 competition is Saturday, 22 September. This competition is open to anyone, but the photographs (colour slides or black & white prints) must be of birds which occur in Scotland. The entries are judged by the Editorial Committee.

STOP PRESS - BOOKSHOP MANAGER VACANCY

Maureen Williams, who is expecting a baby, is leaving us in June; we wish her and her husband Ben all the very best. The post of bookshop manager/SB business editor is advertised in this number.

Recent Reports

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

The second half of the winter produced a spell of hard weather in January with a lot of snow still on the hills at the end of March. Gales in January and February contributed to high auk mortality. **Guillemots** were the main species involved, but in January fair numbers of **Puffins** and about 100 **Little Auks** were also washed ashore in Shetland. The predominantly south-east winds brought unusually many large, brightly-coloured northern **Bullfinches** to the Northern Isles in February and a fall of Scandinavian thrushes and finches there at the end of March. Late March also produced an unprecedented influx of **Avocets** on the east coast, with at least 16 reported—though the only ones I saw were on blue car-stickers.

White-billed Divers were off Orkney in January and Whalsay throughout the period and the Hermaness **Black-browed Albatross** returned on 29 February. Two **Manx Shearwaters** off Turnberry on 3 January were very early. Amongst the less usual wildfowl were 7 **Bewick's Swans** in East Lothian, and **Bean Geese** there, at Strathbeg, and in Orkney, where a **Brent Goose** was also seen. Other notables were a female **Mandarin** in Edinburgh, the Loch Ryan **American Wigeon**—still present into February, and a **Green-winged Teal** in Shetland, while a male **Garganey** at Loch Stiapavat, Lewis, on 3 February was an exceptional winter record. The Loch Insh **Ring-necked Duck** visited Inverness during the hard weather in January and another called at a waterfowl collection on Islay in February. **Red-head Snews** were reported from 7 sites during the period and males at Inverness, Hoselaw and Kelso.

Three or four **White-tailed Eagles**, two lacking tags and rings, were in Shetland, with singles in Orkney and Jura. (We now know that some of the Rhum birds have lost both tags and rings). **Gyr Falcons** were seen at Thurso and in Orkney and Shetland; Bobby Tulloch saw one from his kitchen window and Eric Meek saw another while changing a car wheel.

Two **Cranes** visited Orkney at the end of March, when there were 6 **Avocets** at Findhorn, 2 at Lossiemouth, 2 on the Ythan, 2 at Invergowie, 1 on the Eden, 2 at Dunbar, and one on the Clyde at Ardmore. **Killdeers** were on South Uist and in Ayrshire in January, at least one **Spotted Redshank** wintered in the Lothians, and there were 3 late-January records of **Great Skuas**, **Glaucous Gulls** were scarce but there was a big influx of **Iceland Gulls** from mid-January, resulting in peaks of 55 at Stornoway, 15 at Scalloway, 12 at Ullapool and 10 at Kirkwall. Other gull records of interest include **Mediterranean Gulls** at Largs and St Andrews, an early **Lesser Black-back** at Stornoway on 16 February, and the **Thurso Ross's Gull**—which continued to perform in broad daylight into March. Wintering **Sandwich Terns** were seen at Peterhead and Aberlady, when there were up to 3 in January. A **Brünnich's Guillemot** in Orkney was characteristically dead, but a few live **Little Auks** accompanied the dead ones in January. January 22 was an odd date for a **Turtle Dove** at Culterty.

The falls at the end of March brought **Black Redstarts** to Newburgh, Eyemouth and Lerwick, the first **Wheatear** to Ayrshire, and 2 **Great Grey Shrikes** to Unst. The 35 **Jackdaws** seen at Carloway, Lewis in February were probably migrants—but a **Chough** reported in Shetland eluded all the local birders.

PETE ELLIS

THE SCOTTISH ORNITHOLOGISTS' CLUB

MANAGER FOR THE BIRD BOOKSHOP

THE Bird Bookshop is run by the Scottish Ornithologists' Club for the benefit of the Club and Scottish Ornithology. The Bookshop is one of the world's leading ornithological booksellers, carrying a stock of over 600 English language titles. Its business is primarily mail order with a significant proportion of orders from overseas. The Bookshop sales in the last financial year were over £125,000. The staff of the Bookshop consist of a Manager and three Bookshop Assistants.

We are looking for an enthusiastic person with an interest in birds who will be responsible to the Club Secretary for the management and day to day running of the Bird Bookshop. A knowledge of accounts is desirable but not essential. Most important is enthusiasm for the job, a willingness to work hard, and the ability to get on well with people. The Bookshop Manager also acts as business editor of the Club's journal *Scottish Birds*, and deputises for the Secretary in his absence.

Further details of the job and application forms are obtainable from John Davies, Secretary, Scottish Ornithologists' Club, 21 Regent Terrace, Edinburgh EH7 5BT. Tel. 031 - 556 6042.

THE SCOTTISH ORNITHOLOGISTS' CLUB

THE Scottish Ornithologists' Club was formed in 1936 and membership is open to all interested in Scottish Ornithology. Meetings are held during the winter months in Aberdeen, Ayr, the Borders, Dumfries, Dundee, Edinburgh, Glasgow, Inverness, New Galloway, St Andrews, Stirling, Thurso and the Wigtown District at which lectures by prominent ornithologists are given and films exhibited. Expeditions are organised in the summer to places of ornithological interest.

The aims of the Club are to (a) encourage the study of Scottish ornithology and to promote an interest in wild birds; (b) co-ordinate the activities of Scottish ornithologists; (c) encourage ornithological work in Scotland; (d) encourage conservation of Scottish birds and protection of threatened and rare species; (e) hold meetings for discussion and to arrange ornithological field meetings, and (f) appoint local recorders and publish material relating to Scottish ornithology, including *Scottish Birds*, the club journal.

There are no entry fees for Membership. The Annual subscription is £7.50, or £3 in the case of Members under twenty one years of age or Students under 25 who satisfy the Council of their status as such at the times at which their subscriptions fall due. The Life subscription is £150. Family Membership is available to married couples and their nominated children under 18 at an Annual subscription of £11, or a Life subscription of £225. *Scottish Birds* is issued free to Members but Family Members will receive one copy between them. Subscriptions are payable on 1st October annually.

Scottish Birds, which is published quarterly, includes papers, articles and short notes on all aspects of ornithology in Scotland. The club also publishes the annual Scottish Bird Report.

Application for Membership form, copy of the Club Constitution, and other literature are obtainable from the Club Secretary, John Davies, 21 Regent Terrace, Edinburgh EH7 5BT (tel. 031 - 556 6042).



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