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CONTENTS OF VOLUME 11, NUMBER 4, WINTER 1980

	<i>Page</i>
Bird mortality following the <i>Esso Bernicia</i> oil spill, Shetland, December 1978 (M. Heubeck & M. G. Richardson)	97
How many Lesser Whitethroats breed in the Lothians? (S. R. D. da Prato)	108
Birdwatching in Ayrshire (Angus Hogg)	113
Short Notes	
Unusual death of a Shag (D. J. Bates)	117
Communal roost of Hen Harriers (S. Mitchell, D. J. Bain, D. Thorogood)	117
Hen Harrier's interaction with Otter (R. C. Dickson)	119
Great Skuas hunting disabled prey (C. J. Booth) ...	119
Status of Collared Dove in Islay (C. G. Booth) ...	120
Obituary	
George Waterston (Ian Durance Pennie)	121
Henry Montagu Douglas-Home (J. I. Meikle)	124
Reviews	
Guide to Living Birds by J. F. Webb, J. A. Wallwork & J. H. Ellgood (R. D. Murray)	125
A Century of Bird Books by Peter Tate (M. P. Harris)	125
The Country Life Book of Birds of Prey by Gareth Parry & Rory Putman (J. Wilcox)	126
Handbook of the Birds of Europe, the Middle East and North Africa : the Birds of the Western Palearctic, Volume II : Hawks to Bustards edited by Stanley Cramp et al. (N. Picozzi) ...	126
Current literature	128
Notices	129
The Scottish Ornithologists' Club	130
Branch News	139
Current Notes	139

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SCOTTISH BIRDS

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Vol. 11 No. 4

Winter 1980

Edited by D. J. Bates

Bird mortality following the *Esso Bernicia* oil spill, Shetland, December 1978

M. HEUBECK and M. G. RICHARDSON

(Plate 13)

The latest chapter on the blacker side of the oil boom reports how the industry again failed to cope with a spill that left over 3,700 birds dead. The casualty list was surprisingly varied, ranging from divers to buntings. The Great Northern Diver losses are particularly worrying in view of the small European population.

Just over a month after opening, the Sullom Voe oil terminal (Shetland) experienced its first major oil spill when heavy fuel oil leaked from the 190,000 tonne tanker *Esso Bernicia*. The spillage occurred around midnight on 30th December during the final stages of berthing after one of the three attendant harbour tugs caught fire and released its tow. The *Esso Bernicia* struck a loading jetty sustaining an 8m gash in her own fuel tanks and spilling 1,174 tonnes of oil into the sea.

During the following day the bulk of this oil was contained in the vicinity of the terminal jetties by Vikoma booms and over the next four days calm seas and light onshore winds kept the oil in the jetty area. Clean-up activity was hampered however by the low temperatures, blizzards and a lack of equipment, and recovery of oil within this period was restricted to drag lines removing oil and oiled substrate from the shore.

On 3rd January both main booms containing the oil deflated due to mechanical failures. At 09.00 on the 4th the wind veered to the north, pressing one boom against the jetty pilings and causing it to partially sink with the loss of all the oil which was spread rapidly throughout the northern section of Sullom Voe.

The distribution of oil pollution

Strong tidal currents spread the oil rapidly throughout Yell Sound and heavy floating oil and sheens were seen during an aerial survey on 5th January in patches from Whalsay and Out Skerries in the east (30 km from the terminal) to the Ramna Stacks (RSPB reserve) in the north. Unknown quantities of oil also moved northwards out of Yell Sound lightly polluting sections of the western and northern coasts of Unst although no oil was seen to move northwards along the east coast of Yell.

Relatively small amounts of oil remained on the sea by 18th January and the oil on the shore had stabilized to a degree and was not refloating off. From our surveys we estimated that 105 km (65%) of the coasts of Yell Sound and Sullom Voe were polluted and more than 30 km were heavily contaminated (fig 1). A more detailed account is given in Richardson (1979).

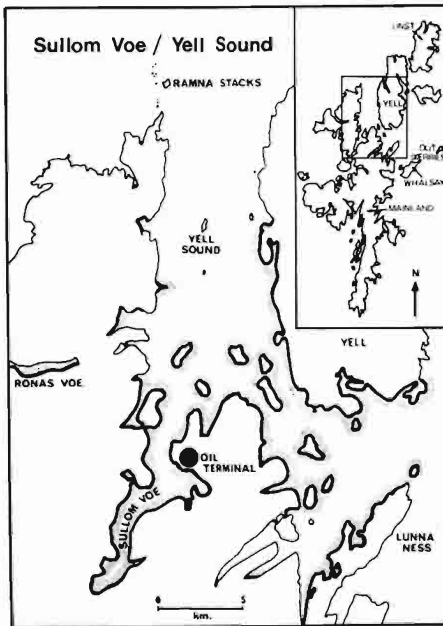


Fig. 1. Yell Sound - Sullom Voe showing the coastline surveyed (heavy lines and shading).

In the first few days following the spill, the only oiled birds seen in the area were a Goosander and ten gulls. However, following the collapse of the booms and the subsequent escape and rapid movement of large quantities of oil, it became clear that seabird mortality was likely to be considerable.

Methods

We assessed bird mortality in two ways: by intensive beached bird surveys and by continuing the programme of counting waterfowl and seabirds in the Sullom Voe/Yell Sound area started in 1975. The methods used in these surveys and the ornithological interests of the area have been detailed elsewhere (Richardson *et al.* in press). Between 4th January and 13th March, 162 km of the coastline of Yell Sound and Sullom Voe were surveyed on foot by NCC, Aberdeen University and RSPB staff with assistance from the Shetland Bird Club and the general public (fig. 1). Most of this coastline was surveyed at least twice and some stretches more than ten times during the ten week period. More distant areas such as Whalsay, Out Skerries, Nesting and Ronas Voe were also examined periodically.

One survey of the area was made by boat on 28th November 1978, prior to the spill, and four surveys were made on the 10th and 23rd January, 16th February and 6th April (Heubeck 1979a).

All corpses were removed from shorelines, identified and checked for rings and dumped on the moor behind the beach. Virtually all of these birds were thickly coated in viscous oil and became stuck fast to the grass so that the chances of them being carried back to the beach by scavengers were considered minimal. The corpses of 57 Great Northern Divers, one Black-throated Diver and 95 Tysties (Black Guillemot) were collected during this incident. These were deep frozen and later sent to the Royal Scottish Museum (Edinburgh) for further research and preparation as study skins. The skin of the single White-billed Diver is now lodged in the Department of Zoology Museum, University of Aberdeen.

Beached bird surveys

Between 31st December and 13th March 3,702 oiled birds of 49 species were found on the shores of Sullom Voe, Yell Sound and some more outlying areas. Less than 3% were found alive and these were humanely destroyed. This mortality is tabulated in the Appendix.

During this period, oil and oiled birds were also found on beaches throughout Shetland from northern Unst to Fair Isle. Whilst we recognized that birds oiled in the Sullom Voe/Yell Sound area could have flown or been carried by currents considerable distances, many records of oiled birds in Shetland were excluded from the *Esso Bernicia* figures on geographical grounds. Subsequent analyses of oil on both beaches and corpses confirmed that fuel oil from the *Esso Bernicia* reached the north coast of Unst. It was, however, also evident

from analyses carried out by British Petroleum that a number of other different oils (crude oil sludges, weathered crude oils and a variety of fuel oils) were affecting seabirds around Shetland at that time (D. F. Duckworth, pers. comm.). These mortalities, including a large kill of auks in the south and west Mainland during early March, are detailed elsewhere (Heubeck 1979b).

Six species made up over 85% of the identified mortality attributed to the Esso *Bernicia* spillage: Great Northern Diver (146), Shag (683), Eider (570), Long-tailed Duck (306), Guillemot (336) and Tystie (633).

Most dead Great Northern Divers were found on the west coast of Yell Sound and Lunna Ness, favoured haunts of these birds. In addition, the pattern of oiling on many of these divers suggested that they had become oiled whilst asleep and then sought shelter in the voes along the west coast of Yell Sound.

The majority of dead birds found in Sullom Voe were sea-duck (mainly Eider) whilst Shags were the commonest fatalities on the Yell Sound islands (an area known to hold large feeding and roosting concentrations). On the south coast of Yell 101 Long-tailed Ducks were found and these probably represented the traditional wintering flocks present to the north and west of Lunna Ness.

Most of the birds killed in Sullom Voe and Yell Sound were either duck (30%), Cormorants or Shags (23%) or auks (34%, largely Tysties). All other bird families represented less than 5% of the identified total. For instance, despite being common in the area, gulls accounted for only 4.8% of the identified total whilst only 18 Fulmars were found dead and oiled (the estimated breeding population in Yell Sound and Sullom Voe is around 8,000 pairs (Bettencourt da Camera *et al.* 1979).

Boat surveys of live birds

The number of waterfowl counted in Sullom Voe at the end of November was 654. Surveys during previous winters showed that most species increased in number as winter progressed with peak numbers present during February and March (Richardson *et al.* in press). Assuming that the 1978/9 season would have followed this same trend we estimated the number of waterfowl in Sullom Voe at the time of the spill to be approximately 730. This difference between observed and estimated numbers is shown in fig. 2.

The survey on 10th January found that of the 339 birds alive in the voe 13% were oiled. This number was reduced to 105 by the 23rd. Even this low number was undoubtedly inflated by the immigration into the voe of Shags and Cormor-

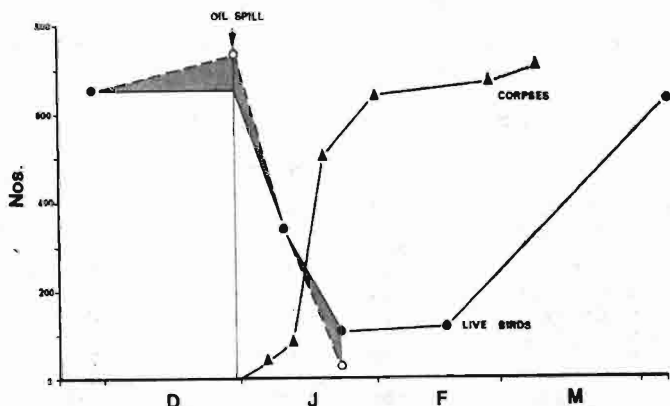


Fig. 2. The accumulated numbers of dead oiled seabirds and waterfowl found in Sullom Voe (triangles) compared with the numbers of live birds seen in the voe during boat surveys. Filled circles represent observed number of live birds, open circles represent estimated (predicted) number of live birds. That the observed number of live birds on 23rd January is higher than the predicted number is doubtless due to immigration (see text).

ants (whose distribution often changes in relation to tides and thus food availability), freshwater duck (whose numbers on the sea are often determined by the freezing of adjacent lochs) and small numbers of returning Razorbills and Guillemots. Excluding these, the estimated mortality of waterfowl exceeded 95% (table 1).

Similarly, the estimate of mortality in southern Yell Sound (where more than 1,500 waterfowl corpses were found) was greater than 75% (table 2).

There is good correlation between the decrease in live birds recorded during boat surveys of Sullom Voe and the accumulated total of dead, oiled birds found in the area (fig. 2). This tends to refute suggestions made at the time of the spill that emigration of birds from the area was a principal reason for the observed decline.

Fig. 2 and tables 1 and 2 indicate that the numbers of birds remained depressed into February but that by early April birds of a wide range of species had moved into Yell Sound and Sullom Voe. In Sullom Voe this not only included the commoner species (e.g. 426 Eider) but also the less numerous: Slavonian Grebe (two), Velvet Scoter (nine) and Red-breasted Merganser (27). All species normally present in the voe during winter (except Great Northern Diver) were again represented just three months after the incident.

Table 1. Boat surveys of Sullom Voe

Figures in brackets refer to birds oiled but still alive and these are included within the totals.

A. Sedentary species (during winter)

	28.11.78	10.1.79	23.1.79	16.2.79	6.4.79
Great Northern Diver	9	—	—	1	—
Slavonian Grebe	13	5	—	—	2
Eider	342	130(33)	9	31(1)	426
Long-tailed Duck	87	46(3)	—	2	17
Common Scoter	—	—	1	—	—
Velvet Scoter	16	10	—	4	9
Red-breasted Merganser	50	40	9(1)	6	27
Tystie	63	19(6)	3(1)	2	6
Totals	580	250(42)	22(2)	46(1)	487

B. Mobile species*

Red-throated Diver	—	—	—	1	75
Cormorant	8	10	23(1)	24	8
Shag	36	6(1)	28(1)	17	17
Whooper Swan	—	1	—	3	—
Wigeon	4	—	—	—	—
Mallard	7	38	17	3	—
Goldeneye	19	34(1)	4	8(1)	7
Guillemot	—	—	6	9	2
Razorbill	—	—	5(1)	2	38(1)
Guillemot/Razorbill	—	—	—	3	—
Totals	74	89(2)	83(3)	70(1)	147(1)

*Includes species whose numbers are affected by tides, the freezing of adjacent freshwaters and also spring arrivals.

Table 2. Boat surveys of southern Yell Sound

	28.11.78	23.1.79	6.4.79
Red-throated Diver	—	1	67
Black-throated Diver	5	—	—
Great Northern Diver	44	2	15
Cormorant	43	34	54
Shag	716	202	199
Eider	209	24	213
Long-tailed Duck	125	16	9
Red-breasted Merganser	—	1	3
Guillemot	8	29	77
Razorbill	—	19	169
Guillemot/Razorbill	—	4	—
Tystie	447	35	75
Little Auk	4	—	—
Puffin	—	—	8
Totals	1601	367	889

Ringling recoveries

All birds found during beached bird surveys were examined for rings and 13 ringed birds were found (six Cormorants, six Shags and one Guillemot). These birds were all of Shetland origin and it is notable that the Cormorants and five of the Shags were ringed as pulli during 1978. All the ringed Cormorants originated from one colony, Clett Stack at Westerwick on the west coast of Mainland, while two of the Shags were ringed on Fair Isle, two at Sumburgh Head (south Mainland), one on Fetlar and one on Foula in 1961. The Guillemot was also ringed on Foula, as an 'adult' in 1970.

Discussion

The actual mortality caused by this incident was undoubtedly greater than the 3,702 corpses found, since:

(a) Birds may have drifted or flown out of the Sullom Voe/Yell Sound area and either sunk at sea or washed ashore along unsurveyed coastlines. Evidence from fishing boats trawling in Yell Sound indicates that some birds thickly coated in fuel oil sank (R. Duffie, pers. comm.).

(b) Birds were overlooked on oiled shores amongst the general morass of strandline debris. In addition, snow was often lying down to the low tide mark, particularly in January. Repeat surveys of shores by experienced personnel indicated that up to 50% of corpses, especially of the smaller species such as Tysties and Long-tailed Ducks, could be overlooked on some occasions.

(c) A number of corpses were removed from shores during both mechanical and manual cleaning operations.

We estimate that the majority of birds oiled within Sullom Voe came ashore actually within the voe. In Yell Sound, the proportion which beached locally may have been lower. Previous oil spill incidents in more open sea situations have put estimates of the total kill at two to ten times the number found (Bourne *et al.* 1967, Hope Jones *et al.* 1978, Barrett 1979). We suggest that the *Esso Bernicia* incident may have killed double the number of corpses found, but probably not more.

The effects on birds

The species killed by this oil spill were typical of other in-shore incidents, with seaduck, divers, grebes and other sedentary diving species being the principal casualties (Buck & Harrison 1967, Greenwood & Keddie 1968, Campbell *et al.* 1978). The mortality of divers (all four species) and Tysties was of particular significance. To put the mortality of each species into some perspective, table 3 indicates the number

Table 3. The effect of the 'Esso Bernicia' oil spill expressed as percentages of the estimated breeding or wintering populations in Shetland

Figures from P. K. Kinnear (pers. comm.)

Breeding species	Estimated population (individuals)	% killed
Red-breasted Merganser	200	17
Tystie	4,000	16
Eider	6-8,000	7-10
Cormorant	960	4
Shag	22,400	3
Wintering species		
Great Northern Diver	3-400	37-49
Velvet Scoter	30	23
Long-tailed Duck	1,500-2,000	15-20
Slavonian Grebe	50-100	8-16

The mortalities of all other species were less than 1% of their estimated Shetland populations.

killed expressed as a percentage of either the estimated Shetland breeding or wintering populations (figures from P. K. Kinnear pers. comm.).

Comparison have been made between the numbers of Great Northern Divers (66) killed in the *Amoco Cadiz* spill (Hope Jones *et al.* 1978) and the size of the breeding western Palearctic population in Iceland, estimated at 100-300 pairs (Cramp *et al.* 1977). In view of the numbers wintering in Scottish waters (in excess of 1,000 birds), it seems likely that there is also migration of Great Northern Divers from Greenland and Canada to European waters in autumn, for this passage is known to occur in Red-throated Divers (Cramp *et al.* 1977). It is possible that biometrics and analyses of gizzard grit of the birds now in the Royal Scottish Museum will throw some light on the breeding locations of Great Northern Divers wintering in Scotland.

The high mortality of Great Northern Divers following the *Amoco Cadiz* disaster was thought to have been partly due to the fact that many were in wing moult and unable to escape from the area (Hope Jones *et al.* 1978). However, all of the 146 Great Northern Divers found oiled during the *Esso Bernicia* incident were in winter plumage and full winged, emphasizing this species' particular vulnerability to floating oil.

Fortunately the numbers of Red-throated Divers affected by this incident were relatively small, with these birds only returning in appreciable numbers to Sullom Voe/Yell Sound during March and April (tables 1 and 2). However, Bundy (1976) has indicated that many of Shetland's Red-throated

Divers (c.50% of the British breeding population) feed throughout the spring and summer months in Sullom Voe and Yell Sound. Future oil spillages, both acute and chronic, could therefore seriously affect this species.

The mortality of 633 Tysties represents the largest single recorded kill of this species in an oiling incident in the British Isles. The Operation Seafarer survey produced a figure for the British and Irish population of 8,343 pairs (2,330 pairs in Shetland), although the authors (Cramp *et al.* 1974) admit that this could be an underestimation. A more recent estimate of 4,000 individuals in Shetland (P. K. Kinnear pers. comm.) is, in our opinion, also too low. What is certain is that the effect on local numbers was severe.

Oil spill contingency planning

The *Esso Bernicia* incident highlighted a number of deficiencies in the local oil spill contingency plan (SVOSAC 1979). This had been developed around predicted spillages of North Sea crude oil with the recognition that a bunker fuel oil spill was so remote as to be discounted. The inability of dealing effectively with spilt heavy fuel oil, either with chemical dispersants or mechanically, was apparent in May 1978 during the *Eleni V* incident (HMSO 1978) and was again demonstrated in the present case. Failures occurred in all types of boom used and it proved impossible to prevent the majority of oil moving out of the relatively sheltered waters of Sullom Voe into the fast tidal streams of Yell Sound.

The oil industry and the local authority are currently investigating ways of strengthening their anti-pollution contingencies, including the provision of booms at strategic locations in Sullom Voe designed to reduce oil leaving the voe.

Acknowledgments

Without considerable assistance from members of the Shetland Bird Club and general public, unfortunately too numerous to mention, this work would not have been completed. For their help in beached bird surveys and the collection of corpses we are particularly indebted to Bobby Tulloch and David Lea (RSPB), Bob Davis, Steve North, Peter Reynolds (NCC), Gus Jones, Neil McKenzie and Miss Joyce Gammack (under contract to the NCC). We are also grateful to John Lemlin (Esso) and Dr Bill Syratt (BP Environmental Control Centre) for considerable logistic support and to Ian Lyster (Royal Scottish Museum) for his co-operation. Our thanks go to Dr Bill Bourne, Prof George Dunnet, John Forster and Peter Hope Jones for their helpful comments on the manuscript.

Summary

A spill of 1,174 tonnes of heavy fuel oil from the tanker 'Esso Bernicia' at the Sullom Voe oil terminal (Shetland) on 31st December 1978 polluted an estimated 105 km of the shoreline of Sullom Voe and Yell Sound. The effect on birds was both local and severe, with a known 3,702 birds

of 49 species killed. Particularly affected were six species: Great Northern Diver (146), Shag (683), Eider (570), Long-tailed Duck (306), Guillemot (336) and Tystie (633). These species made up over 85% of the mortality.

An estimated 95% of seabirds and waterfowl present in Sullom Voe at the time of the spill were killed and at least 75% in Yell Sound. The total estimated mortality is thought not to exceed double the number of corpses found.

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M. Heubeck, Zoology Department, University of Aberdeen,
Tillydrone Avenue, Aberdeen.

Dr M. G. Richardson, Nature Conservancy Council,
Alexandra Wharf, Lerwick, Shetland.

**Appendix. Birds killed by the 'Esso Bernicia' oil spill,
31st December 1978 to 13th March 1979**

	Sullom Voe	Yell Sound	Elsewhere	Total
Red-throated Diver	4	2	1	7
Black-throated Diver	—	3	—	3
Great Northern Diver	15	109	22	146
White-billed Diver	—	1	—	1
Diver sp.	—	—	1	1
Slavonian Grebe	6	2	—	8
Grebe sp.	1	—	—	1
Fulmar	—	11	7	18
Gannet	—	—	2	2
Cormorant	10	24	5	39
Shag	99	530	54	683
Grey Heron	2	—	—	2
Whooper Swan	1	—	—	1
Pink-footed Goose	—	1	—	1
Mallard	2	1	—	3
Tufted Duck	1	—	—	1
Scaup	—	—	1	1
Eider	253	288	29	570
Long-tailed Duck	49	229	28	306
Common Scoter	—	1	—	1
Velvet Scoter	7	—	—	7
Scoter sp.	1	1	—	2
Goldeneye	2	—	—	2
Red-breasted Merganser	21	12	1	34
Goosander	1	—	—	1
Duck sp.	1	1	1	3
Moorhen	—	1	—	1
Ringed Plover	1	—	—	1
Golden Plover	5	—	—	5
Dunlin	1	—	—	1
Purple Sandpiper	2	2	—	4
Snipe	—	1	—	1
Curlew	6	4	2	12
Redshank	2	1	4	7
Turnstone	8	1	—	9
Wader sp.	1	1	—	2
Black-headed Gull	2	2	1	5
Common Gull	2	2	2	6
Herring Gull	15	11	1	27
Great Black-backed Gull	12	29	10	51
Kittiwake	9	22	4	35
Gull sp.	13	10	5	28
Guillemot	20	202	114	336
Razorbill	—	10	6	16
Tystie	72	445	116	633
Little Auk	—	6	8	14
Puffin	3	24	12	39
Auk sp.	1	15	9	25
Rock Dove	—	3	1	4
Pigeon sp.	—	1	—	1
Short-eared Owl	1	—	—	1
Rock Pipit	1	—	—	1

	Sullom Voe	Yell Sound	Elsewhere	Total
Blackbird	1	2	—	3
Hooded Crow	8	2	—	10
Raven	—	1	1	2
Starling	3	11	1	15
Snow Bunting	1	—	—	1
Passerine sp.	—	—	1	1
Unidentified sp.	209	323	29	561
Totals	875	2,348	479	3,702
Corpses/km	21.9	20.6	—	—

How many Lesser Whitethroats breed in the Lothians ?

S. R. D. da PRATO

(Plates 14-15)

Several species of small passerines that breed in southern England normally only occur in Scotland as passage migrants although they breed at higher latitudes in Scandinavia. When breeding is discovered this is often quoted as evidence for range expansion and this in turn has been linked to theories of climatic change (Williamson 1975) or even post glacial recolonization (Murray 1979). Two problems affect such theories. They are virtually impossible to prove or disprove in a scientific sense as they are not amenable to testing, which means they rely on the circumstantial evidence of changes in status of a number of relatively scarce species. Since this information can be readily collected by people in their spare time, papers on such topics have become a popular feature of local bird reports and certain journals. This raises the second problem: how accurate are the basic data? Studies of warblers in Midlothian suggest that with a secretive species like the Lesser Whitethroat a breeding population can exist without local birdwatchers being aware of its presence.

This note describes how mistnetting by the Edinburgh Ringing Group has proved Lesser Whitethroats breeding at one site for at least six years and intermittently at several others. At first it was thought that only isolated pairs were involved but colour ringing backed up by intensive observation in the 1979 season has shown that there are too many young birds about in summer to be the progeny of only one or two pairs. However, the really significant point is the dearth of sight records by other observers. The Lothians are among the

better watched areas of Scotland, yet apart from migrants on the coast the local recorders received only three sight records of Lesser Whitethroats in possible breeding habitat between 1974 and 1979, all from Edinburgh R.G. members who knew what to look out for, while fieldwork for the *Atlas* (1968-72) produced one record of possible breeding. Although a genuine increase in the numbers of Lesser Whitethroats breeding in Scotland may have occurred the evidence is so far inconclusive. The only ringing recovery to date was a bird found breeding in coastal scrub in East Lothian in 1976 by D. R. Langslow which had been ringed as a juvenile near Doncaster (Yorkshire) on 24th August 1971. This suggests northwards expansion but the bird could have been moving south when ringed. Sharrock (1976) commented that the *Atlas* results were essentially similar to the occasional scattered records quoted by Baxter & Rintoul (1953).

The first bird was caught in the main study site on 25th June 1974. As the site is surrounded by open fields and the bird had a vascularized brood patch it was almost certainly breeding there. Breeding adults have been mistnetted every year since 1974, when regular trapping began, except 1976 when only recently fledged young were caught but adults were heard singing (once) and alarming. To date (1979) 44 Lesser Whitethroats have been caught at breeding sites, 20 adults and 24 birds of the year. Of this total 36 birds have been trapped at the main study site, 15 of them in 1979. This sudden increase in captures is more likely to be due to the very intensive fieldwork in 1979 than to a sudden increase in the Lesser Whitethroat population.

Besides mistnetting, a Common Bird Census (CBC) has also been carried out at the main site since spring 1973, yet the first indication of breeding Lesser Whitethroats was the bird in the net in June 1974. Since then we have tried to locate singing birds in spring but even censusing at dawn and dusk twice per week in May rarely produces more than the occasional sight record or alarm call. Indeed in 1978 when four adults and two young birds were trapped the CBC map was so sparse that the BTO Populations Section commented that Lesser Whitethroats didn't seem to be holding territory that year.

Our studies show that Lesser Whitethroats arrive in Midlothian from the first week in May, slightly earlier than the majority of Common Whitethroats. The birds are much harder to locate than any of the seven other warbler species recorded in the study area. This may be partly due to the low density diminishing territorial conflict but is also a characteristic of the species. Howard (1907-14) noted that singing Lesser

Whitethroats were likely to be unmated cocks and our experience in 1979 agrees with this, the only singing being in late June when a male appeared in the study area after the pair known to be breeding had fledged their one chick.

Territories have always been on a warm, south facing bank in a jungle of hawthorn, rose, bramble and gorse interspersed with nettles and other herbage. Nest sites were about a metre above the ground in a bush, the sites being much more enclosed than those used by the many pairs of Common Whitethroats that also nest in the study area. Nests were searched for in only two years: 1975 and 1979. On both occasions Lesser Whitethroats were the first warbler chicks ringed in these years, ahead even of the many Willow Warblers, a species where the males start arriving in late April.

Lesser Whitethroats, like other warblers, leave the nest before their wing and tail feathers are fully grown. This means they spend the first week of fledged life hopping through cover as they can only fly from twig to twig. At this stage the parents become noisy and the harsh *tak* call is distinctive once learned. This *tak* call seems to act as a warning to the chick which immediately freezes in a hunched position and only moves when the observer is a metre or two away.

The adults collect food mainly from the hawthorn bushes near the nest area. They rarely hunted more than c.7m from the position of the chick, collecting food such as aphids, caterpillars and a variety of small flies. Their feeding habits resembled those of Willow Warblers more than Common Whitethroats, with hunting taking place more often in the mid to upper canopy of mature hawthorn than in the nettle, rose, young hawthorn and the bases of mature hawthorn where Common Whitethroats collect food when feeding chicks. Unfortunately the secretive habits of Lesser Whitethroats did not allow data to be obtained on their feeding habits outwith the period of feeding chicks.

We have no evidence for double brooding in Lesser Whitethroats and there is a general tendency for Scottish warblers to be single brooded. Even Common Whitethroats which reputedly double brood (Campbell & Ferguson Lees 1972) only occasionally do so in Midlothian. Unless birds are individually marked, e.g. by colour ringing, it is extremely difficult with small passerines to differentiate genuine double brooding from replacement clutches and birds pairing again after initial failure due to predation of their first mate. However, the early fledging of young Lesser Whitethroats could allow a second brood to be started depending on when—and where—the parents start to moult.

The process of moult is absolutely critical to a bird yet it has had scant attention compared to nest centred studies. Trans-Saharan migrants basically have the choice of moulting quickly on the breeding grounds or delaying moult till they reach tropical Africa. Both strategies are found within the genus *Sylvia* and some species, notably the Common Whitethroat, seem prone to perform at least part of their autumn migration with moult suspended or incomplete (Pimm 1973, Swann & Baillie 1979). This also applies to some Scottish birds (Ballantyne & da Prato 1976) and we now know that a few individuals can even breed while in moult (da Prato in prep.) which makes it very difficult to know when their breeding cycle is definitely finished. At least some Lesser Whitethroats complete moult in the Lothians, possibly in under 40 days as suggested for English birds (Spencer & Mead 1979). If they all do this their strategy is similar to Willow Warblers which in Midlothian rear a single brood and then go into a rapid moult which effectively ends breeding for the season.

Once fledged and independent of their parents—around two weeks after leaving the nest—young warblers leave the natal area. Late broods leave even sooner. At this stage they are not fully feathered and quickly undergo a partial moult. This allows bare areas, e.g. the belly, to feather over and in the Lesser Whitethroats the characteristic black face patch appears. Spencer & Mead (1979) suggest that until post juvenile moult is complete young warblers will not move any great distance but we need more information on this important period in their lives. What is very striking is the number of young warblers that move through our study sites in late summer. These birds rarely stay for more than a few days but their weights are not high enough to permit long distance migration (da Prato & da Prato 1977). It seems there is a general drift by young birds before they move south on migration proper.

In 1979 only one Lesser Whitethroat fledged in the main site yet another nine young birds were present for short spells in July or August. This suggests that the surrounding countryside contains several pairs, especially as some of these pairs will fail and the progeny of those that succeed will not all be netted in our study site. If we speculate that each 10-km square in the Lothians holds an average of three to five pairs of Lesser Whitethroats (*The Atlas* estimated 25-50 pairs per 10-km square in England) and if squares largely composed of unsuitable habitat are excluded then the population may be between 50 and 100 pairs. This figure is really only an informed guess; however it is probably a much better guide to the true status of the species in southeast Scotland than the

occasional references in bird reports. One wonders what other species might have Scottish breeding populations that have been similarly overlooked?

Postscript: the 1980 season

A pair of Lesser Whitethroats took up territory in the main study area in May but failed to rear any young. Netting at this site was less intensive than in 1979 but young Lesser White-throats wandered through the site on at least nine occasions in July and early August. More time was spent netting in the surrounding countryside and when this paper went to press in late August 22 Lesser Whitethroats had been trapped at seven sites and unringed birds seen at another five. One wonders whether 50-100 pairs is too low an estimate for the Lothians.

Acknowledgments

Thanks go to the local recorders K. S. Macgregor and R. W. J. Smith, to L. L. J. Vick who found the first nest, and the various ringers who helped with mist netting, especially Mrs E. S. da Prato who also helped with observations of colour ringed birds.

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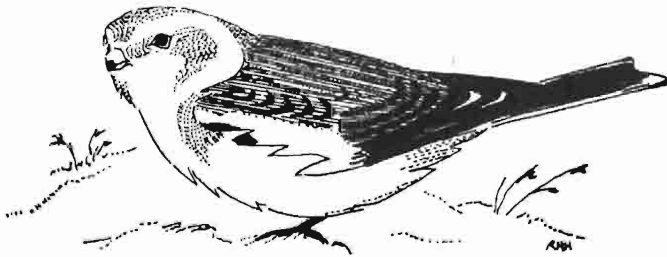
S. R. D. da Prato, 38 Carlaverock Grove,
Tranent, East Lothian.

Birdwatching in Ayrshire

ANGUS HOGG

With an area of 2,931 km², Ayrshire is Scotland's seventh largest county. Perhaps its topography could best be described as a half saucer with the rim representing the upland area which forms a convenient border to its landward side. The coastline extending for 135 km faces on to the outer reaches of the Firth of Clyde. The county is drained by six major rivers, the Garnock, Irvine, Doon, Girvan, and Stinchar, with the Nith reluctantly heading off eastwards. It is the enormous diversity of the habitat contained within its compact area, which is unlikely to be rivalled in many other parts of Scotland, that offers the birdwatcher almost unlimited variety.

Inland the hills reach up to 772m on Shalloch on Minnoch and provide some magnificent scenery, particularly in the south which is still a wilderness area of great value. A deserted, snow covered Mullwharchar may only contain a few Snow Buntings and an ever optimistic Raven in January, but by April the area begins to welcome the return of the Golden Plover and Meadow Pipit. Ring Ouzels and Wheatears, amongst the first of our migrants, breed on the scree strewn slopes.



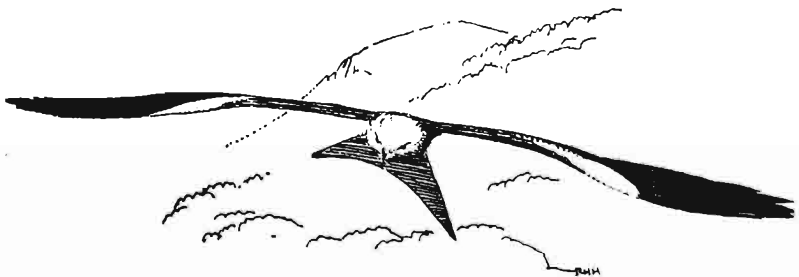
SNOW BUNTING A. Hogg

Conifer afforestation of much of the hill land has deprived it of some species but has brought in many more, and no visitor to a planted area can now ignore the songs of Sedge Warbler, Grasshopper Warbler, Whinchat and of course Chaffinch during the breeding season. Common Crossbills too in the mature larch and spruce can look impossibly orange against a December snowscape, as the cock birds proclaim their breeding territories.

Moving lower down to the river valleys with their scattered and declining hardwood stands, the rich, rolling pastureland

supports a greater wealth of birdlife. If you can ignore the raucous cries of Rooks in March you might just hear the first Chiffchaff. By May the same woods will be alive with the songs of Blackcaps, Garden Warblers, Redstarts, Spotted Flycatchers, and the resident thrushes, finches, and tits. But the real gem is the plaintive Wood Warbler found only in small numbers in the south of the county. These days the Green Woodpecker is beginning to make his presence known around Fairlie and Portencross, and the number of Jays in the Girvan valley has increased dramatically. Raptors too enjoy a slightly more enlightened period of game preservation with the Sparrowhawk and Kestrel doing well, and the Buzzard still plentiful in the valleys of the Stinchar and Girvan.

Fortunately hedgerows are still a common feature of Ayrshire farmland and Whitethroats and Dunnocks thrive, especially if the farmer has one of those impenetrable pockets of gorse on his land. Here the Linnets and Yellowhammers make up for the ever declining population of Corn Buntings. Sadly, the Corncrake seems certain to enter the category of former breeders long before the Corn Bunting. Farmers recall with just a hint of regret that its rasping call was once common throughout the county only 20 years ago. How much nicer it must have been in the valleys of south Ayrshire in the 19th century when the bird made itself a thorough nuisance at night and the Red Kite kept it company by day! The elegant Barn Owl is still the more valuable for the variety it continues to lend to these same farming areas.



RED KITE A. Hogg

Now, it doesn't take a trained meteorologist to tell you that the west of Scotland catches most of the rain that's on the go, but this can have its compensations too. As farmland floods, wildfowl move in during the autumn, and one pool near Maybole has recorded 12 species of ducks, five of geese, and all three swans in the last five years. The value of these areas is inestimable to migrating waders, with the same wetland hosting Whimbrel, Black-tailed Godwit, Spotted Redshank and

Wood Sandpiper, along with large numbers of Lapwings, Golden Plovers, Curlews and Snipe. True marshland is becoming a scarce commodity since local government and farmers rarely attach anything but an economic value to land. However, the few areas left support breeding Water Rails, a wide range of ducks including Shoveler, Teal, and Pochard, as well as a winter population of Jack Snipe.

Riversides and lochs provide plenty of interest, too, whether it's watching the stumpy Dipper performing miracles *underwater*, or listening to the wonderfully thin, piping song of the Common Sandpiper in late April. Great Crested Grebes grace most of our larger lochs, Martnaham being noteworthy in this respect and also for its wintering wildfowl which have included Smew in recent years. Loch o' th' Lowes is a useful stopping-off point for migrating birds, with many of the Solway's wintering Barnacle and Pink-footed Geese using it as a signpost, before heading out down the Nith valley.

Ayrshire's coastline itself offers great diversity, with a shingle bar at the Stinchar mouth, rugged cliffs near Ballantrae, sand dune system at Turnberry, and saltmarsh at Irvine. The latter site *must* be visited on a cold, clear winter day when the Wigeon and Teal can be seen at their finest. Redshanks, Oystercatchers, and Curlews crowd on to the mudflats as the tide recedes, only to have their nerves shattered by a stooping Peregrine or a low-level run by an equally unexpected Merlin. Offshore, Eiders, Goldeneye, Scaup, and Red-breasted Mergansers bob on a seldom calm sea. To the north lie the largely reclaimed mudflats of Hunterston. With the coming of industry the birds have been forced to concentrate on smaller areas but have not suffered otherwise. The numbers of Shelduck and waders have shown no decline and in 1978 they were joined by a visiting Spoonbill.

To the south Doonfoot is always worth a visit. The large gull flocks will almost certainly contain Glaucous Gull throughout the year, while Iceland Gull is still regular in spring, and Mediterranean Gull has appeared twice in recent years. The shoreline here is well worth inspection during April and May with migrant Wheatears, Whinchats and White Wagtails stopping en route to their breeding grounds. Perhaps the most typical of the birds of the marram grass zone is, however, the jaunty little Stonechat which took such a hard knock during the winter of 1978/9.

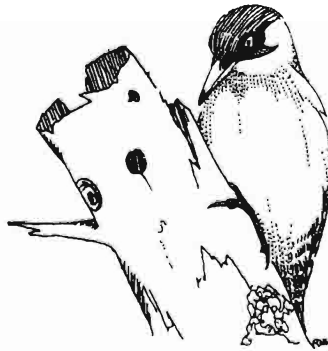
If seabirds are your passion then a trip to Turnberry Point during August or September will give you plenty to look at. Try to imagine a heaving sea fighting against a southwesterly gale with up to 6,000 Manx Shearwaters and hundreds of Gannets, Fulmars and Kittiwakes all involved in the struggle.

Now throw in a few of the scarcer seabirds: Leach's Petrel, Great Shearwater, or Sabine's Gull, and you'll soon appreciate that seawatching can also be exciting.

But then, of course, I've forgotten to mention the islands, Ailsa Craig, Lady Isle and Horse Island, each with its own seabird spectacle. By far the most breathtaking is that huge volcanic plug, Ailsa Craig, with its Gannet colony of over 14,000 pairs whitewashing one end, and Kittiwakes, Guillemots and Razorbills squabbling over what's left. Puffins are now few in number, but a recent ringing programme raises the question of whether or not Storm Petrel might be breeding. Even here odd migrants occur from time to time, and the Hooded Crow has a lonely breeding outpost.

To describe Ayrshire's birdlife adequately would take very many more pages than afforded here, but past status guides and annual reports are available, the former currently undergoing revision. Nor have I made reference so far to that delight of the twitcher—the rarity. The following rarities have all been seen in the county in the last decade: Cory's Shearwater, Little Bittern, White Stork, Ring-necked Duck, King Eider, Barrow's Goldeneye, Red-footed Falcon, Gyrfalcon, Crane, Marsh Sandpiper, Lesser Yellowlegs, Wilson's Phalarope, and Roller. You want to add a few? Well, whether it's rare birds or merely a splendid variety of commoner breeding birds you want to see, Ayrshire's got plenty to interest the birdwatcher. Why not give it a visit sometime and you'll see what I mean?

*Angus Hogg, School House, Crosshill,
Maybole, Ayrshire, KA19 7RH*



GREEN WOODPECKER *A. Hogg*

Short Notes

Unusual death of a Shag

On 4th April 1979 R. Plant found a dead immature Shag on the beach at Portobello (Midlothian) with an 11 cm Horse Mussel *Modiolus modiolus* clamped on the tip of its upper mandible. He informed W. Stout of the *Evening News* who brought it to the SOC in Regent Terrace that evening when it was photographed with the mussel still firmly stuck and therefore still alive (plate 13).

The bird was examined on 6th April by J. W. Macdonald of the Ministry of Agriculture, Fisheries and Food Veterinary Laboratory at Lasswade who reported it to be a female in good condition. It had died from a massive haemorrhage under the skin of the upper neck although there was no external damage. The lungs were waterlogged and the tip of the upper mandible was fractured, both of which possibly happened after death. The mussel had by now become detached.

While the circumstances of death cannot be known with certainty, and the Shag is not known to feed on molluscs, it seems possible that it attacked the open mussel under water, fatally injured itself struggling to get free, but also loosened the mussel from the substrate so that both were soon cast ashore.

D. J. BATES

Communal roost of Hen Harriers

At 18.05 GMT on 28th February 1978, while driving past a reedbed in Argyllshire, we saw a ringtail Hen Harrier land amongst the reeds. During the next 20 minutes more harriers (all ringtails) arrived to settle in the marsh. Although the terrain prevented continuous observation of all the birds, we considered there were 13 individuals. The evening was dry, fairly mild, clouding over after a generally sunny afternoon, and it was not dark until about 18.45. The roost site is a *Phragmites* bed of 50 ha with several pools and dense thickets and isolated bushes of willow *Salix*. The marsh lies at an altitude of 30m between an abrupt wooded hill and a rounded heathery hill and is open to a wide valley. The surrounding country is largely uncultivated: heather/grass moor and mossland, riverside meadows, and some immature conifer plantations.

On the following evening (1st March) the site was watched from the east in poor weather: a strong, cold south to south-easterly wind driving heavy rain, and it was almost dark by

18.15. However, at least 18 harriers—16 ringtails and two grey males—arrived at the roost between 16.55 and 18.08. Most early arrivals were from the northeast and observation was therefore concentrated in that direction. These birds were flying into the wind and along the line of the neighbouring river valley. A possible four additional birds—two grey males and two ringtails—were first sighted over the middle of the roost and therefore were not certainly new arrivals. All birds seen arriving were flying fairly low (up to 6m above the reed heads). Some dropped into the reeds almost immediately, but most spent some time prospecting landing spots, and some, having settled, rose again to move to other locations. Some ringtails prospecting for roosting spots flushed others which had already settled, and one observer considered that in these instances the disturbed birds were small individuals, i.e. females were apparently able to displace immature males. This activity, plus the screening effect of the willow thickets and the darkening backcloth of rising ground, hindered observations. Therefore some birds seen arriving may have passed without settling (see below) and others may have arrived undetected from the west.

On 2nd March the weather was again poor, with strong southwest wind and (from 17.07) heavy rain. We watched from the southwest but incoming harriers were harder to sight and follow against the buff and brown background of reeds, trees and moorland. The first ringtail appeared from the east at 17.03 but flew right across the marsh and away to the west. Subsequently, until 18.13, at least seven harriers flew in and settled in the roost, again arriving from east and northeast. A possible three additional ringtails were first sighted over the middle of the roost. At 18.25 the poor light forced us to give up the watch, although it was not really dark until 18.45.

Although birds were fewer, this watch revealed some aspects of behaviour not previously noted—(1) the bird which overflew the roost site; (2) the fifth bird to arrive, having prospected the reedbed, landed on a (probably sheltered) peat bank at the edge of the marsh and did not move into the roost area until eight minutes later; (3) several ringtails and a grey male landed and settled in isolated willows or on the edges of the willow thickets, mostly at or just above the general level of the reed heads but in a few instances on more exposed branches. These birds had not dropped into the reeds by the time poor light prevented further observation.

There are several features of topography and of roost activity as observed at this Argyll site similar to those recorded by Watson (1977, *The Hen Harrier*)—(1) a level wet site with dense, tall vegetation; (2) roost probably inaccessible to

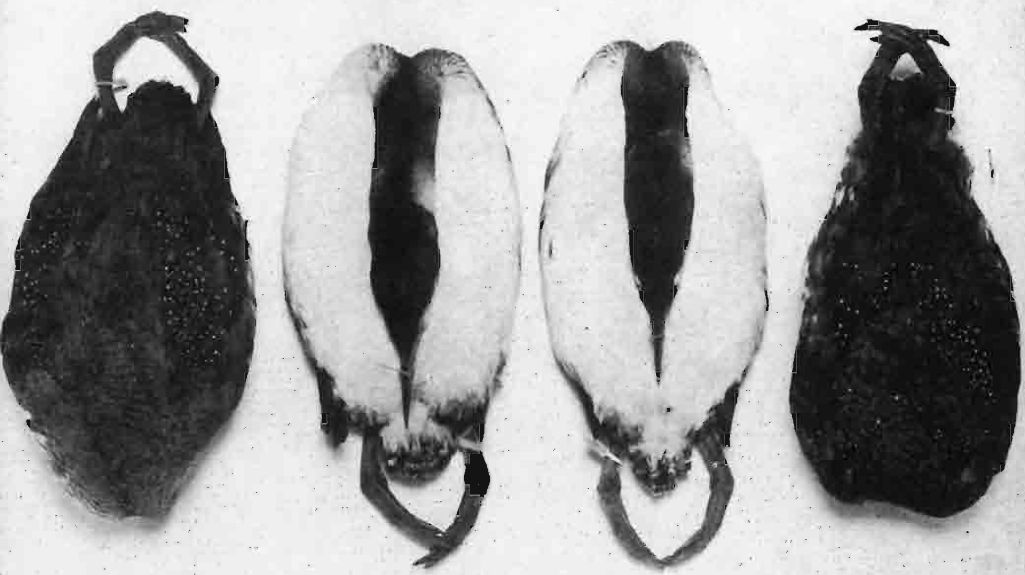
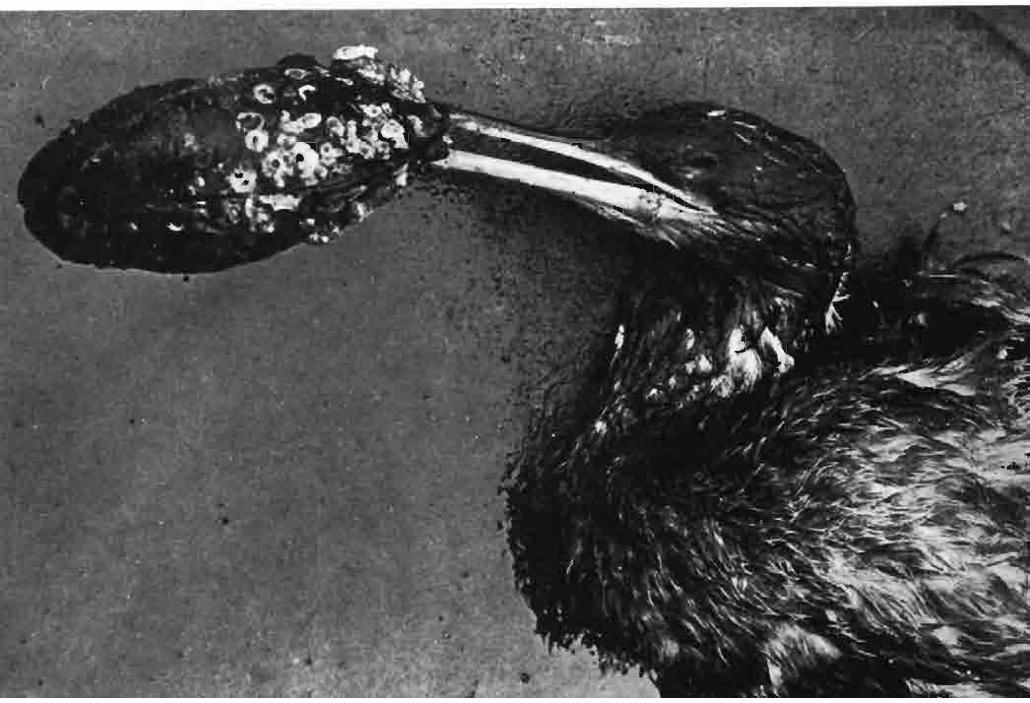


PLATE 13 (a). Some of the Great Northern Divers killed after the *Esso Bernicia* oilspill in Shetland in December 1978 and now preserved as flat study skins in the Royal Scottish Museum (Edinburgh) (p. 97).

Royal Scottish Museum

(b) Shag found dead with a Horse Mussel attached to its bill, Portobello (Midlothian) 4 April 1979 (p. 117).

W. Stout





PLATES 14-15. Warblers in the Lothians (p. 108).

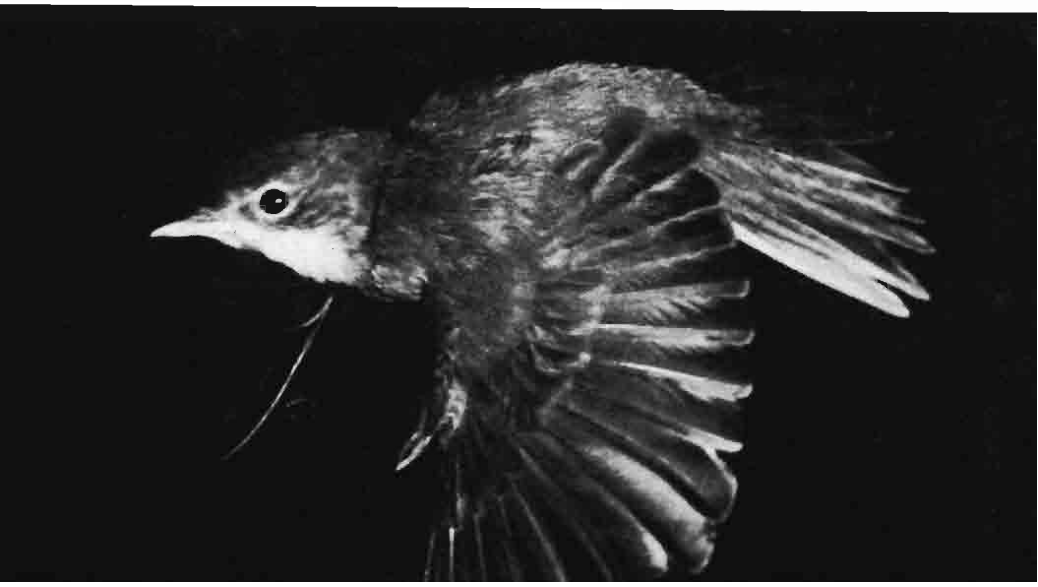
E. S. & S. R. D. da Prato

PLATE 14 (a) Lesser Whitethroat breeding adult.

(b c d) Lesser Whitethroat heads showing variation in the characteristic dark facial patch due to age and abrasion; (b) one year old in June—note heavy wear; (c) freshly moulted adult in August; (d) juvenile in early July before first summer partial moult.

PLATES 14 (e)-15. Flight photographs using flash at 1/8000 second.

PLATE 14 (e) (Common) Whitethroat juvenile (July). PLATE 15 (a) Grasshopper Warbler adult (July). (b) Sedge Warbler adult (June). (c) Willow Warbler juvenile (July).





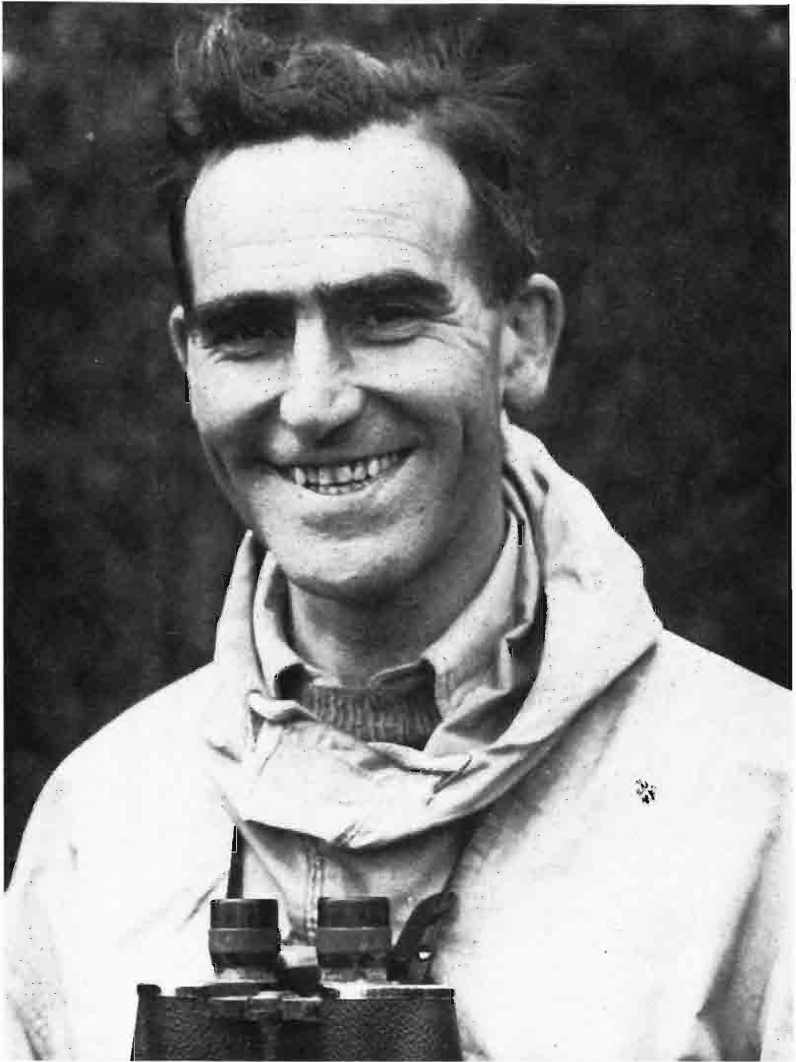


PLATE 16. Dr George Waterston (obituary p. 121).

J. MacGeoch

casual human intruders; (3) arrival of harriers within a time-span of just over an hour, with no mass arrivals; (4) tolerance by harriers of human presence and vehicular traffic on nearby roads. However, one feature not in accord with Watson's assessment of the normal pattern was that several birds perched for some time on exposed bushes in spite of strong wind and rain, and were not seen to drop into the reeds.

S. MITCHELL, D. J. BAIN, D. THOROGOOD

Hen Harrier's interaction with Otter

On 9th December 1979 at 10.00 GMT I was watching a ring-tail Hen Harrier in the vicinity of one of their roosts in Gallo-way. It was hovering more persistently above one spot than was usual for a hunting harrier. It landed on a fence post and on the ground for about seven minutes before again hovering persistently with legs lowered, just touching a post without landing. At the same time an Otter *Lutra lutra* jumped up, its forefeet landing on the post, just below the harrier, which continued to hover above. The Otter apparently moved away for the harrier followed, hovering above the undergrowth until it had landed in it out of sight nearby two minutes later.

Watson & Dickson (7: 24-49) found no direct evidence that Otters attacked Hen Harriers at their roosts although they were considered predators. Donald Watson (1977, *The Hen Harrier*) gave an instance of a ringtail at its roost diving on two Otters. The above incident gives further evidence that both will react (apparently offensively) to each other, even during the day.

R. C. DICKSON

Great Skuas hunting disabled prey

In 1963 a pair of Oystercatchers reared three young near my house at Whiteness (Shetland). On 28th June, just when the young had started to fly, I noticed that one of them had a slight limp and seemed to have injured its left leg. On 5th July the bird was able to fly quite strongly but the leg appeared worse, causing some difficulty in walking. As I was watching the family party feeding, a Bonxie (Great Skua) flew over. The adult birds immediately flew up to mob it, calling vigorously, while the young also took flight. The Bonxie suddenly turned and dived at one of the young, knocking it to the ground. Before the Bonxie could land to continue its attack, the Oystercatcher managed to scramble under a pile of rocks. The Bonxie then flew away, pursued by the adult Oyster-

catchers. When the birds had settled down I was able to observe that the attacked Oystercatcher was the one with the injured leg. Two days later the Oystercatchers left the area and I do not know whether the bird survived.

On 8th August 1970 at the Pool of Virkie (Shetland) I saw three Bonxies chasing a group of immature Kittiwakes. A Bonxie pulled one of the Kittiwakes down, holding it by the neck feathers, and kept it on the ground by standing on its wing. As I walked over to the struggling birds the Bonxie flew off leaving the Kittiwake on the sand. On examination the bird, though dazed, appeared otherwise unhurt from the attack. I was surprised, however, to find that it was blind in its right eye, either congenitally or from some former injury. I released it 15 minutes later, when it flew away strongly. During the next four days I saw Bonxies kill three immature Kittiwakes but on each occasion the attack was made over water, the Kittiwakes being drowned and eaten so that I was unable to examine the bodies for signs of possible physical defects.

In *British Birds* 58: 342 M. P. Harris gives an account of a Kestrel apparently selecting a blind Starling out of a flock.

C. J. BOOTH

Status of Collared Dove in Islay

Collared Doves were almost certainly present in Islay (Inner Hebrides) from 1961. There were eight in 1963 (3: 299) and then a general increase, so widespread that they were usually not considered worth recording. In August 1972 there were more than 50 at Laphroaig distillery, 45 at Islay House farm and more than 50 at Port Ellen distillery. There were c.80 in Bowmore in November 1977, and flocks in several other places. In 1978 there was a noticeable decline and a flock at Bridge House kennels which had been c.40 was down to eight. By the end of 1979 it was difficult to find more than ten in one place; the flock in Port Ellen was recorded as eight and that at Bowmore as nine.

The main food source was spilt barley and the distilleries confirm that there has been no alteration in the amount spilt. Evidently from the number of Rock Doves, Pheasants and Rooks still feeding on the roads there is no serious decline in this supply. There is not sufficient evidence to pronounce on their success as breeders. I thought at first that two poor summers (1978-9) and colder winters here had perhaps caused the northern limits to recede, but having recorded pairs and groups of up to six birds in small woods widespread through-

out the island, and pairs nesting in open farm buildings this spring (1980), it would seem that they are no longer dependent on spilt grain and that there has been a change in habitat rather than a decline in total. The experience of other observers would be interesting.

C. G. BOOTH

Obituary

GEORGE WATERSTON, OBE, LL D, FRSE

(10 April 1911 - 20 September 1980)

(Plate 16)

George Waterston, founder secretary, past president (1972-5), and latterly Honorary President of the Scottish Ornithologists' Club, died in hospital after a long illness. He was born in Edinburgh, fifth of that name in direct descent from the George Waterston who in 1752 founded the firm of printers and stationers. His mother was a Sandeman and George therefore inherited the genes of two distinguished Scottish families.

George's interest in birds began as an Edinburgh Academy schoolboy and in 1929 a small group who had either just left or were about to leave school met together in the Waterston home to form the Inverleith Field Club. This turned out to be a largely social organization so four years later, by mutual agreement, a second club was formed, the Midlothian Ornithological Club, with the serious study of birds as its sole objective.

But George was already searching beyond the confines of the club and had made contact with three persons whose influence and inspiration shaped his whole life and kindled the passion that never left him—his love for and dedication to Fair Isle. These three were Surgeon Rear-Admiral J. H. Stenhouse and the Misses E. V. Baxter and L. J. Rintoul. Stenhouse had taken over Dr William Eagle Clarke's Fair Isle migration studies and met George who had frequented the Royal Scottish Museum since his school days. He was so impressed by George's interest and enthusiasm that he soon realized that here was the successor needed to carry on this work.

The Misses Baxter and Rintoul, similarly inspired by Eagle Clarke, had identified the Isle of May as a place of importance equal almost to Fair Isle. Their work was passed on to the MOC and the first members to visit the May were George Waterston and Frank Elder in 1932. Very soon plans were prepared for what was to be the first co-operatively manned migration study centre in Britain.

George's first visit to Fair Isle was in 1935, accompanied by A. G. S. Bryson. Thereafter followed annual visits until the outbreak of war in 1939. On at least one occasion he stayed with George Stout at Field where he had to admit that conditions were a bit rough. 'Once I arrived to find Fieldy gutting a sheep on the kitchen table. We lived on that sheep for a fortnight but when I saw Fieldy about to throw the head on the midden I suggested that he should make sheep's heid broth. That evening I lifted the lid of a great black pot boiling on the fire to see what was for dinner, and there was an appalling greasy scum with the sheep's heid boiling merrily in the middle—complete with eyes, teeth and wool!' By this time it was George's burning ambition to establish on Fair Isle an observatory similar to that on the Isle of May.

1936 saw the formation of the Scottish Ornithologists' Club with George as honorary secretary, a position he held until he was appointed half-time salaried secretary in 1955. Also in 1936 he made an expedition to Lapland with J. H. B. Munro, reaching Rybachi Peninsula which is now part of Russia. This was the famous occasion of George's arrest and detention for straying across the Russian frontier.

The war brought George as a lieutenant in the Royal Artillery to a new island—Crete—in 1941. After the capture of Crete by the German forces he remained in hiding, with little food and no water other than what could be drained from the radiators of wrecked vehicles, until he was taken prisoner. The story of the prison camp has been told before, of meeting Ian Pitman and planning the Fair Isle observatory. In Ian's words: 'You had to concentrate on something that interested you and take it for granted that you had a future. With one man it was designing a new type of tattie-howking machine, with George it was Fair Isle.'

Then there was the remarkable association with Professor Stresemann. Erwin Stresemann was not a Nazi sympathizer and it is perhaps not realized what a tremendous personal risk he took in befriending and corresponding with the British prisoners. George learned that Stresemann had been in Crete after the German occupation and was preparing a paper on the birds of Crete and sent him all his Crete bird notes (Stresemann 1943 [pub. 1944]. *Überblick über die vögel Kretas und der vogelzug in der Aegaeis*, *Journal für Ornithologie* 91: 448-514). On p. 451 are acknowledgments to six contributors including 'G. Waterston, 31 Jan.-20 May 1941' and on p. 470 a separate acknowledgment of the help given by Lt. G. Waterston.

In the prison camp he developed the disability that was later to dominate his life, and when told by a German medical

officer that nothing could be done in the camp hospital, George, never missing an opportunity, replied, 'There is a surgeon in Edinburgh who can put me right. His name is Henry Wade.' The response was astonishing: 'You are quite right. I know of Henry Wade.' Repatriation followed, and that extraordinary moment of emotion when the first landfall was the Sheep Rock of Fair Isle!

After hospital treatment George joined James Fisher for 18 months on the Agricultural Research Council's Rook Survey before rejoining the family business. The office at the back of Waterston's shop in George Street, Edinburgh, soon became the headquarters of the SOC and of much other ornithological business. Events then began to move rapidly. Fair Isle came on the market. With the help of Ian Pitman George promptly bought it and for six years was Laird of Fair Isle before transferring ownership to the National Trust for Scotland. The Fair Isle Bird Observatory Trust was set up and the observatory founded in the war-time camp with Kenneth Williamson as director. George was appointed secretary and remained so until his death.

The dream was fulfilled but stresses and uncertainties brought on further ill health; family ties were loosened as George was now completely dedicated to Fair Isle and Scottish ornithology. The final break came when the RSPB made him an offer of half-time employment as Scottish representative (later Director, Scotland) and the SOC agreed to pay a salary to their secretary. For a time he worked from a room in the National Trust for Scotland building in Charlotte Square, but George had a vision of a Scottish ornithological centre to house the SOC, the RSPB and FIBOT. This became a reality with the purchase of 21 Regent Terrace in 1959 but at the same time his energies had so broadened the field of bird protection in Scotland that a full-time RSPB director was required, a post he held for 13 years. His first marriage had come apart some time before and in 1958 he married Irene Kinnear who shared all his interests and travels and by her devotion enabled him to lead as full a life as possible during his years of illness.

In the mid sixties George's attention turned to Greenland and the Canadian Arctic where with Irene he joined several scientific expeditions and built up a notable collection of Arctic literature. Signs of renal failure began to appear, however, and in 1972 he found himself unable to cope with the demands of his RSPB work and the following year the Waterstons moved to their Humble cottage. George still had the physical capacity for another Arctic expedition but soon a

failed kidney transplant condemned him (and Irene even more so) to the inexorable tyranny of a home kidney machine.

Defeat was utterly unacceptable to this man and he and Irene made three more visits (complete with home kidney machine in a caravan!) to the Highlands. Driven by devotion and determination he attended the opening of the new Fair Isle hall in July, but this was his final visit for only two months later he was laid to rest in the old churchyard at Humbie. This time Fair Isle came south as among the mourners was his old friend Jerry Stout of Leogh.

George had two great attributes in his life and work. The first was his enormous capacity to get things done: his philosophy of life was that whatever must be done someone can and will be found to do it. Secondly his vast wealth of personal contacts throughout Scotland, from county officials and sheriffs to landlords, crofters and gamekeepers. He was essentially a Scotsman devoted to Scotland, but on the other hand was no narrow nationalist. He was fond of the lighter forms of Scots verse and in a relaxed moment it was a delight to hear him recite faultlessly his favourite—'Tam and the Leeches', and he was proud too of his family relationship with Tam's creator, Dr David Rorie.

In his life's work George had a unique influence on the spread of interest in the study of birds in Scotland and the furtherance of bird protection north of the Border. This was publicly recognized in 1964 by the award of the OBE for his services to British ornithology and conservation. Ten years later Dundee University conferred upon him the honorary degree of LL D for his outstanding work in these fields.

We have lost a great Scotsman and there are many beyond the membership of his club who will share this loss with Irene and his family.

IAN DURANCE PENNIE

HENRY MONTAGU DOUGLAS-HOME

(21 November 1907 - 19 July 1980)

Throughout the country many, in all walks of life, must mourn the death of Major the Hon. Henry Douglas-Home. In the heyday of wireless broadcasting Henry endeared himself to the nation through the many talks he gave as 'The Birdman'. Though he was characteristically modest about it, his reputation as an ornithologist is well established both at home and abroad and his advice and opinion were widely sought. Perhaps it is not so well known that, when he became less active, he devoted much time to painting beautiful pictures of all the birds of Berwickshire.

Every summer for many years parties from all parts of the country visited the Hirsell. It was a date that was looked forward to in the calendar of excursions. 'The Major', as he was generally known, was always waiting at the stables to greet the visitors and after a short talk set off with the party. On the way his information and anecdotes were always laced with humour which added a sparkle to the day, whatever the weather. Though often in much pain from a knee injured in a riding accident many years ago, he always gave kindly consideration to any question whether from the youngest or oldest member of the party, however elementary it might be. Many will cherish memories of summer days walking with the Major through the beautiful woods of the Hirsell, along the banks of the Leet, by the lake and picnicking on the lawns at Springhill. By the end of the day, however weary he might be, no one could persuade Henry to leave until he had waved good-bye to the last bus or car leaving the lakeside, maybe at six or seven in the evening.

I am glad that Henry was eventually persuaded to write an autobiography. His book *The Birdman*, while full of information, also conveys his charm, his sense of fun and the cheerfulness that was his attitude to life.

To those who knew him well the warm friendship, so generously given, his ready wit and unfailing courtesy to all and sundry will ever be sorely missed.

J. I. MEIKLE

Reviews

Guide to Living Birds by J. F. Webb, J. A. Wallwork & J. H. Ellgood, London, Macmillan, 1979, 291 pp, many drawings, diagrams and maps, 21 x 13 cm. £4.95.

This is part of a series devoted to a family by family description of each class of the vertebrates. While the approach used may suit other vertebrates, where data are incomplete and sketchy, it is not particularly suitable for birds. Instead of using the accepted systematic list of families, the authors have used one of their own that divides birds into three groups: ground, aquatic, and perching birds. The list of characters that defines a family are generally incomplete and occasionally inaccurate in its stress. The maps are poor and the illustrations wooden and misleading. Much better and certainly more attractive presentations of family characteristics can be found in many books dealing with the birds of the world.

R. D. MURRAY

A Century of Bird Books by Peter Tate. London, H. F. & G. Witherby, 1979, 256 pp, many plain text photographs, 24 x 16 cm. £10.50

This is a well produced book which is divided into two distinct parts. The first deals in turn with fine bird books, books on British birds,

foreign birds, county and regional studies, monographs, travel and biography, aspects of behaviour, birdwatching and field guides. A large number of books are dealt with in an extremely, maybe over, enthusiastic fashion, and a little more critical treatment like that which starts to emerge in the field guide section would not have been out of place. Many bird books are hardly worth the shelf space given to them! The book is illustrated by a series of 30 photographs of distinguished authors and a large number of photographs of book covers. The former are interesting and worth showing but most of the latter seem to serve no useful purpose.

The second part is a listing of all the titles known to the author of bird books published in Britain since 1875—about 2,000 titles in all—very clearly displayed but maddeningly divided into more or less, but not quite, the same divisions as the first part of the book. This list appears to be pretty thorough as all the 100 of my books I checked were there and the only mistake I detected was that the *Fauna of the Moray Basin* is dated 1895 (not 1896). This section is potentially valuable but its use is drastically curtailed because the place of publication is not given and most journals (including *Scottish Birds*) require this in reference lists. Such a full list could have saved me, and our librarian, much laborious searching.

It is difficult to see the market for this book. I doubt that many bibliophiles will buy it, and it's a bit expensive for a present. This is a pity because it is the fruit of much detailed work and it might so easily have slotted into an unapparently unoccupied niche.

M. P. HARRIS

The Country Life Book of Birds of Prey by Gareth Parry and Rory Putman. London, Country Life Books (Hamlyn), 1979, pp. 120, 35 colour plates, many plain photographs, drawings and maps, 35 x 27 cm. £20

Gareth Parry, a young Welsh artist, was commissioned to paint 35 birds of prey. The resulting finely detailed colour plates of Accipitridae, falcons and owls in typical habitat form the basis of the book and cover 30 European species (23 of which were mentioned in the *Scottish Bird Report 1978*). The narrative by Rory Putman, lecturer in animal behaviour and ecology, provides a general introduction to the biology of birds of prey and their relationship to man, including falconry and the pesticide problem. This section is illustrated with habitat photographs, line engravings and distribution maps. Each colour plate is accompanied by a well-written descriptive text of the species and its main characteristics. The book is of good quality, well presented and interesting. The text provides no fresh information for the informed reader. The plates do not always demonstrate the main identification points mentioned in the text and much of the fine detail would not be visible in the field. Overall a good introduction to birds of prey.

J. WILCOX

Handbook of the Birds of Europe, the Middle East and North Africa: the Birds of the Western Palearctic, Volume II: Hawks to Bustards edited by Stanley Cramp et al. Oxford University Press, 1980, 695 pp, 79 colour plates (full and half page), 16 colour and one plain photographic plates (eggs), many drawings, diagrams and maps, 26 x 21 cm. £30

This volume is likely to prove one of the most popular of the series as it includes those orders of such wide interest as the Accipitriformes (raptors) and the Galliformes (game birds) as well as the Gruiformes

(rails, cranes and bustards). The format is similar to volume one with a general description of each family, followed by descriptions of field characters, habitat, distribution, population, movements, food, social pattern and behaviour, voice, breeding biology, plumage and measurements for each species. All but accidentals are illustrated to show flight pattern and characteristic plumage. The downy young of most Galliformes and Gruiformes are also shown, and there are helpful sketches throughout the text.

Although more than 250 people were consulted in the production of this book, a tight editorial control has been maintained in each section. I found the description of social pattern and behaviour the most interesting and was pleased to see the term skydance given acceptance, a term which, while it may not satisfy the purist, so beautifully evokes the displays of many raptors. Inevitably, some of the finer points in this section may need to be modified in time, such is the effort currently devoted to these studies, but as general accounts for the better known species they are unlikely to be surpassed in the foreseeable future.

My criticisms of the book are slight. In the descriptions of families there are often whole pages without a break for a new paragraph; as the facts contained here are so condensed, it would have been a great help to the reader wishing to locate particular information quickly if there were subheadings either in bold type or capitals throughout this text. Further, a comprehensive introduction was given in volume one. Nevertheless, we have only reached volume two and already the cost is £30 per volume; one can only guess with some trepidation at the cost of the later volumes. In view of this, many people may only be able to buy the single volumes of most interest to them. It would therefore help to include in each a brief key for *inter alia* the colours used on the distribution maps, the fact that standard deviations and sample sizes are given after measurements, and most important, the abbreviations used in the annual cycle diagrams for moult and breeding (P, B, E, Y for primaries, body feathers, eggs and young respectively). I was surprised at the small samples on which most weights and measurements were based. For many raptors and game birds there are far more data which would readily have been made available if they had been requested. The range map of the sedentary Hazel Grouse in the western Palearctic (p. 387) has been superimposed on that of the sedentary Capercaillie (p. 435). This results in the Capercaillie apparently having different winter and summer ranges. All red areas (summer range) should be considered as maroon (present all year) and the grey areas (winter range) should be ignored on this map.

There are some who feel that the concept of a handbook may be outdated because of the wealth of data in the scientific literature and the rapidly increasing number of monographs for individual species and whole families. Volume two of BWP should finally dispel their doubts. To have so much information made available in one book for the general reader, together with a comprehensive bibliography of more than 2,500 references for the specialists, amply justifies this undertaking, and the editors are to be both thanked and congratulated on the results of their truly Herculean task. This volume has maintained the high standard set by its predecessor and is as indispensable, especially as the German *Handbuch der Vögel Mitteleuropas* has not been translated.

Finally, a word of thanks to the publishers: at a time when the GPO regards the label 'Books, handle with care' more as a challenge than a request, and all too many arrive looking as if they had come via Murrayfield, the packaging is excellent and both my volumes have arrived none the worse for their ordeal of 'trial by post'!

N. PICOZZI

Also received

- Silent Death : The destruction of birds and mammals through the deliberate misuse of poisons in Britain** by C. J. Cadbury, Royal Society for the Protection of Birds, The Lodge, Sandy, Bedfordshire, SG19 2DL, 1980, 27 pp, 1 plain photo, diagrams, maps, 21 x 30 cm, softback, £2.
- Care and Rehabilitation of Injured Owls : A user's guide to the medical treatment of raptorial birds—and the housing, release training and captive breeding of native owls** by K. McKeever, Lincoln, W. F. Rannie (PO Box 700, Beamsville, Ontario, LOR 1B0, Canada), 1979, 112 pp, plain photos, diagrams, 28 x 22 cm, softback, \$10.
- The Hawaiian Goose : An Experiment in Conservation** by J. Kear & A. J. Berger, Calton, Poyser, 1980, 154 pp, 1 colour, 46 plain photos, drawings, diagrams, maps, 24 x 16 cm, £9.
- The Butterflies of Scotland : A Natural History** by G. Thomson, Croom Helm, London, 1980, 267 pp, many colour & plain photos, diagrams & maps, 23 x 17, £19.95.

Current literature Articles and reports on the status and distribution of birds in Scotland are listed here. Strictly biological studies such as ecology or behaviour are excluded and so are references from the widely read journals **British Birds**, **Bird Study**, **Ringing and Migration** and **Ibis**. Most items listed and many others are available for reference in the club library and we are grateful to the contributors. The library welcomes copies of work on any ornithological subject.

- The winter attendance of Fulmars at land in NE Scotland. M. A. Macdonald 1980. *Ornis Scandinavica* 11 : 23-29.
- Factors affecting the numbers of Guillemots *Uria aalge* present on cliffs. P. J. B. Slater 1980. *Ornis Scandinavica* 11 : 155-163. [Copinsay (Orkney).] *Autumn Wader Passage at Alemoor Reservoir, Roxburghshire* : 1974-76. T. W. Dougall & D. B. McGinn.
- Caerlaverock Bird Report No. 1* - 1979. M. Wright (comp.) 1980. Nature Conservancy Council, South West (Scotland) Region, The Castle, Loch Lomond Park, Balloch, Dunbartonshire, G83 8LX.
- Eird and mammal numbers in relation to human impact at ski lifts on Scottish hills. A. Watson 1979. *Journal of Applied Ecology* 16 : 753-764.
- Census methods for murrets, Uria species : a unified approach..* Occasional Paper Number 43, Canadian Wildlife Service. T. R. Birkhead & D. N. Nettleship 1980.
- Nature Conservation and the Clyde Estuary*. Report of Symposium at Paisley College of Technology on 12 November 1979. Nature Conservancy Council, South-West (Scotland) Region, The Castle, Loch Lomond Park, Balloch, Dunbartonshire, G83 8LX.
- Birds of Berneray and Mingulay* 1979. Royal Air Force Ornithological Society 1980 (Interim report). Ministry of Defence, Lands 3, Tolworth Tower, Ewell Road, Surbiton, Surrey, KT6 7DR.
- Ayrshire Bird Report* 1979. R. H. Angus Hogg (ed) 1980. SOC (Ayrshire Branch).
- The spring migration of Ringed Plovers through Britain in 1979. P. N. Ferns 1980. *Wader Study Group Bulletin* No. 29 : 10-13.
- Numbers, passage and local movements of Redshanks *Tringa totanus* on the Clyde estuary as shown by dye-marking. R. W. Furness & H. Galbraith 1980. *Wader Study Group Bulletin* No. 29 : 19-22
- Recent recoveries of waders ringed in Britain and Ireland. G. H. Green 1980. *Wader Study Group Bulletin* No. 29 : 24-26.
- Shetland Bird Report* 1979. B. Marshall *et al.* (comp.) 1980. Shetland Bird Club.

- Loch Lomond Bird Report* No. 8 1979. Anon. (comp.) 1980. Nature Conservancy Council, South West Region, Scotland.
- A Report on the Breeding Success of the Peregrine in the Loch Lomond/Trossachs Area of Scotland in 1979.* J. Mitchell 1980. Nature Conservancy Council, South West (Scotland) Region, The Castle, Loch Lomond Park, Balloch, Dunbartonshire, G83 8LX.

Notices

'British Birds' subscriptions SOC members are still entitled to subscribe to *British Birds* at the special rate of £12 instead of £16. See the leaflet sent with the last number of *Scottish Birds* or write to Mrs Erika Sharrock, *British Birds* (Circulation), Fountains, Park Lane, Blunham, Bedford MK44 3NJ.

The seabirds of Berwickshire (11: 13-20) Dr W. R. P. Bourne has pointed out that when using unpublished details of Operation Seafarer counts we should have made specific acknowledgment to the Seabird Group, as stipulated in introductory notes with the summaries deposited for public reference, and that reference to the Nature Conservancy Council (NCC) could be misleading. We readily acknowledge our debt to the Seabird Group and thought this was made abundantly clear in our paper through reference to the Seafarer book. The details reached us from NCC without any introductory notes. This correction in no way detracts from NCC's valuable support for seabird census work in recent years. S. R. D. & E. S. da Prato.

Dyed seabirds Last summer colonies along the west coast of Britain and Ireland were visited by expeditions to colour dye adult seabirds (notably Gannets, Puffins and Guillemots) yellow, blue, red or green. The tail of Gannets, throat and breast of auks, and upperparts of wings of Fulmars and Kittiwakes may be dyed. Following these expeditions (from mid July to mid October) a cruise manned by a team of biologists/ornithologists carried out a series of transects west of Britain and Ireland to determine seabird and cetacean densities in different regions, look for colour dyed birds, and relate concentrations of seabirds and cetaceans to concentrations of different fish species (using experimental fishing and echo sounding techniques). It may throw light on where different seabird and cetacean species concentrate and this will be important for any future action necessary in the event of oil spillages in these regions. I would be grateful if anyone seeing dyed birds would contact me at: Edward Grey Institute, Zoology Dept., South Parks Road, Oxford OX1 3PS. P. G. H. Evans.

Movements of wader populations in western Europe It is becoming increasingly clear that many of the waders for which Western Europe is the major wintering area depend not on one but on a series of estuaries during the non-breeding season and so may be particularly susceptible to the large scale developments proposed for many of the wetlands in this area. For their conservation it is vital to know more about the patterns and timing of movements and the numbers involved. Accordingly a study supported by the Nature Conservancy Council and the European Economic Community is being organized by the Wader Study Group and Durham University. This autumn and winter waders of various species will be marked by colour dyes and temporary leg flags in the large estuarine complexes of the Wattenmeer/Waddenzee (Denmark/Germany/Netherlands) and the Wash (England). While casual sightings of these marked birds will be very welcome, to obtain the most valuable infor-

mation from this project there should be frequent coverage of as many sites as possible (both where such birds are expected and where they are perhaps less likely to occur) around the British Isles and western Europe. Anyone who is prepared to help by checking a site is requested to write as soon as possible to M. W. Pienkowski, Wader Study Group, Dept. of Zoology, University of Durham, South Road, Durham DH1 3LE. (Sightings of colour-marked waders sent to this address will also be forwarded to the relevant study group if they do not concern the present one, as the Wader Study Group now maintains an international register of colour marking schemes. When birds are traced, details of marking will be sent to those reporting sightings.)

The Scottish Ornithologists' Club

REPORT OF COUNCIL

For Year to 30 June 1980

Membership On 30 June 1980 the club had 2732 members, representing a net increase of 30. Although fewer than usual failed to pay their subscriptions by the due date and were then automatically taken off the membership list, a greater number resigned at the beginning of the session after retaining membership for the first year of the increased subscription rates. Inflation inevitably affected new membership, but even so 332 new members joined, including 61 juniors and 8 children nominated for family membership. 7 members took out life membership and 4 existing members were made honorary members. 338 members paid the reduced rate for pensioners. In the table family members are counted as two people; nominated children pay no subscription.

Year to 30 June	1975	1976	1977	1978	1979	1980
Honorary	4	4	1	1	1	5
Life	22	29	29	49	51	58
Ordinary	2175	2406	2536	2572	2357	2387
Junior	252	299	282	271	211	208
Nominated children	63	80	98	87	82	74
	<u>2516</u>	<u>2818</u>	<u>2946</u>	<u>2980</u>	<u>2702</u>	<u>2732</u>
	-135	+302	+128	+34	-278	+30

Covenants The income from covenanted subscriptions is a very considerable help to the club, and council records its gratitude to all those who have signed a deed of covenant. The number of covenanted subscriptions rose from 710 to 756 covering 890 members; this increase almost compensated for the loss in revenue for the year which resulted from the reduction in the standard rate of income tax.

Death Council records with deep regret the death during the year of Sir Frank Fraser Darling; an obituary appeared in *Scottish Birds*.

Finance The accounts again show the club to be in a satisfactory financial situation. Once more this was mainly due to income from the bookshop; sales rose by 26%, but increased postal charges and other expenses resulted in a somewhat smaller increase in overall surplus.

Branches After a series of successful meetings in the spring, Malcolm Ross of Melrose applied to council for authority to form a *Borders* branch of the club. The application was welcomed by council which approved full branch status since over 60 members were recorded in the area.

This, the thirteenth branch of the club will normally meet in Galashiels, and an increase in members is confidently expected from the start of next session. Mr Ross is congratulated for his enthusiasm and hard work in forming this new branch.

Winter meetings and excursions throughout the year took place in all other branch areas. Good attendances at these, and at the annual weekends in the Solway area and Argyll, reflect the wide interest in bird-watching and indicate that the varied programmes arranged for both lectures and excursions meet with members approval. Many members are responsible for the organisation of weekends, excursions and indoor meetings, and council recognises with gratitude the work done and time given by them all.

Annual Conference The 32nd annual conference and 43rd annual general meeting of the club were again held at the Marine Hotel, North Berwick from 26-28 October 1979. While the location is somewhat far south for some Scottish members, the venue is admirable and enables all the events of the weekend to take place in the same building, fostering the club spirit for which SOC conferences are renowned. Some 300 members and guests attended the weekend, including those who had been on the waiting list last year, and once again the conference was fully booked. An account appeared in *Scottish Birds* 11: 29.

Northern meeting In response to requests from members living in the north of Scotland, a meeting was arranged for the weekend 18-20 April 1980 in the Drumossie Hotel, just south of Inverness. Roy Dennis and members of the Inverness branch are congratulated for arranging a most enjoyable and informative weekend with high quality talks. 140 members and guests attended this excellent meeting, an account of which is in the autumn 1980 journal.

Scottish Birds Four issues with 164 pages of text and plates, and the index to volume 10, were published during the year. The editor is congratulated on publishing all four issues on schedule; this enabled all members living in Britain to receive their copy at the start of each quarter.

Scottish Bird Report The decision to publish the SBR separately from the journal was reported last year, and the 1978 report was the first to be printed on its own. While it had been hoped to publish it in time for distribution with the autumn journal, this proved to be impossible in spite of the considerable work put in by local recorders and compilers, and it was sent to members with the winter journal early in December. 'In view of the large number of records submitted each year, all of which have to be collated and edited, it is unlikely that autumn publication will ever be possible; members should normally expect to receive their copy with the winter journal. The 1978 report was bound in volume 10 after the index, but was paginated separately.

Research and fieldwork Surveys organised by other ornithological bodies were again supported by club members, with help being given to the RSPB beached bird survey, the Wildfowl Trust goose and wildfowl counts, and the BTO common bird census and ringing. The research committee plan shortly to initiate a Scottish survey to be covered by existing branches and their members. A request by the BTO to support the 1981 national Nightjar survey was approved. Council gratefully acknowledges the decision of the BTO to allow a copy of the Scottish data from national surveys, and also a copy of ringing recovery data, to be held in the SOC reference library.

Conservation During the year plans of the route proposed by the South of Scotland Electricity Board for the power lines from Torness power station on the East Lothian coast were made public. As the route passed

directly across flight paths of Pink-footed and Greylag Geese on their way to and from traditional feeding grounds, council wrote to the SSEB expressing concern at the route proposed, and urging that a recommended alternative which would avoid most of these areas should be taken. The outcome of further enquiries by the Board is awaited.

Proposals by the Highland Regional Council to develop ski-ing facilities in the Coire an t-Sneachda, Coire an Lochain and Lurcher's Gully on Cairngorm were announced early in 1980. Together with many other organisations, council protested most strongly, on behalf of the club, against the proposals. It believed that the increased disturbance would have detrimental effect on the breeding success of rare birds which occur in the area and also that any development there would represent a major visual intrusion in an area much enjoyed by birdwatchers, and others, for its remoteness compared with the heavily-used ski slopes further east on Cairngorm. It is likely that a public enquiry is to be held into the proposals.

Endowment Fund As noted in the last annual report, the research committee is now responsible for making recommendations to council on applications for grant from the endowment fund. Of the nine applications received eight were approved for grant, totalling £735. The following grants were made: £40 to Martin Cook to continue his study of Crested Tit distribution; £70 to Jim Dickson and Ian Alexander to study Long-eared Owls in forestry plantations; £70 to Michael Nicholl and Keith Brockie to study Heron movements from colonies in east central Scotland; £100 to Bruin Thompson for studies on Mute Swans in the Hebrides; £50 to Bob Swann and Andrew Ramsay for their continued studies on Manx Shearwaters and Shags on Canna; £155 to the Clyde Ringing Group towards the purchase of a cannon net, with the proviso that the net remained the property of the club for five years; £150 to the Highland RG for wader studies in the highlands; and £100 to the Grampian and Tay RG towards the cost of an expedition to Norway to colour-ring Purple Sandpipers.

Scottish Centre The Scottish Centre for Ornithology and Bird Protection continued to be visited by many home and overseas birdwatchers who sought advice on places to visit during their stay in Scotland; the usual large number of postal enquiries were also received.

Throughout the year the SOC council and committees met in the Centre, which was used regularly through the winter for branch and informal group meetings. Other organisations which used the premises for meetings were the Fair Isle Bird Observatory Trust for its AGM and executive committee, the Isle of May Bird Observatory and Field Station Committee, and the Scottish Advisory Committee of the RSPB.

Bookshop Book sales continue to rise and reached over £78,500, once again an increase of over 25% on the previous year. This continued growth in sales, due partly to an increase in customers and partly to the higher cost of books, reflects the interest in ornithological and natural history books as well as the ever widening circle of overseas customers. Great credit is due to the bookshop staff for their hard work and the personal interest they take in customers' orders. It is always a pleasure to meet customers, particularly those from overseas, when they visit the bookshop. The policy announced last year of allowing free postage to SOC members, except for orders under £5, brought in a number of new members, particularly from overseas.

Council is again very grateful to the BTO for inviting the club to

display books at its annual conference at Swanwick, and at the Scottish Ringers Conference organised by the Clyde Ringing Group in Glasgow.

Library The increased allocation to the library enabled more new books to be purchased than in recent years. It also, with sums raised from the sale of seldom-used books from the lending section, allowed a large number of current and back volumes of journals to be bound. The librarian is congratulated on the work he has achieved in the past year and the orderly way in which the library is kept. Once again donations of books, journals and reprints have been received, and council acknowledges these most gratefully. A bequest from the late Miss Stella Wallace, a former club member, was particularly welcome.

Club representation Frank Hamilton and Dr Derek Langslow continued to represent the club on the British Section of the International Council for Bird Preservation, and Bede Pounder on the Duck Working Group of the International Wildfowl Research Bureau. Council records its appreciation to all three for their service to the club.

Secretarial staff After 18 months on the staff, Mrs Maureen Suess left in April to further her studies; we wish her success. Miss Dobby Ridley, daughter of a staff member, very ably helped for over three months in the summer.

Acknowledgments Each year council records its appreciation to many members who have contributed towards the running of the club and its branches; without their enthusiasm, interest and encouragement to new members, resulting in continued recruitment, and this year in the formation of a new branch, the club would not be able to maintain its place as the focus for ornithology in Scotland. Council once again records its thanks to all those who have served on the committees of the club and its branches, have given lectures, served as local recorders and compilers, and helped in other ways throughout the year by giving their time and expertise for the benefit of the club and its members.

The club is also very well served by its staff and council acknowledges with gratitude the loyalty, efficiency and willingness of all who work at 21 Regent Terrace.

For the Council,

VALERIE M. THOM, President.

Revenue account for the year ended 30 June 1980

INCOME	30/6/80	30/6/79
Subscriptions received for year	£11412	£11452
Income tax received on covenanted subscriptions	1717	1771
Dividends and interest received (gross)	1254	693
Surplus on bookshop (sales £78794)	18582	16246
Sale of "Scottish Birds"	698	652
Sundry sales less sundry purchases	45	40
Donations	110	236
Conference	126	244
	<u>£33944</u>	<u>£31334</u>

EXPENDITURE

Branch expenses including lectures	£1457	£976
Travel expenses of council members and delegates to conferences	673	592
Secretarial and editorial expenses	19317	16486
Office expenses	2188	2044
Scottish Centre for Ornithology and Bird Protection: Club's share of running expenses	1828	1168
Cost of books purchased by library, and binding ...	335	335
Expenses in production of 1978 SBR £135 less contribution from "Scottish Birds" Appeal Fund	135	—
Cost of publishing "Scottish Birds" and 1978 SBR (less 1979 raffle income £555 and advertising revenue £1306)	4597	3421
Subscriptions paid	71	75
V.A.T. not reclaimable	142	—
	<u>£30608</u>	<u>£25097</u>
Excess of Income over Expenditure	3336	6237
	<u><u>£33944</u></u>	<u><u>£31334</u></u>

Balance Sheet as at 30 June 1980

	30/6/80	30/6/79
GENERAL FUNDS OF THE CLUB		
Accumulated surplus from previous year ...	£8006	£1769
Add surplus for year	3336	6237
	<u>11342</u>	<u>8006</u>
Life Membership Fund	4013	3363
"Scottish Birds" Appeal Fund	1515	1651
	<u>£16870</u>	<u>£13020</u>
REPRESENTED BY		
Cash in hand and at bank	£1077	£735
Cash in Edinburgh & Paisley Building Society ...	2628	2970
Bookshop stock	16050	12251
Tie, badge and car sticker stock	486	250
Debts due to club	4385	2687
Investments at cost as below	2506	1798
	<u>27132</u>	<u>20691</u>
Less		
Subscriptions paid in advance	£46	36
Debts due by club	10090	7606
Due to Endowment Fund	126	29
	<u>10262</u>	<u>7671</u>
Total net assets	<u><u>£16870</u></u>	<u><u>£13020</u></u>

Investments as at 30 June 1980

	Market value	At cost	At cost
Safeguard Industrial Investments Ltd.— 875 Ord. shares of 25p each	£831	£508	£508
£1280—10½% Treasury Stock 1979	—	—	1290
£2100—10% Treasury Stock 1983	1927	1998	—
	<u>£2758</u>	<u>£2506</u>	<u>£1798</u>

Endowment Fund

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

Revenue account for the year ended 30 June 1980

	30/6/80	30/6/79
INCOME		
Interest and dividends received (gross)	£917	£679
EXPENDITURE		
Grants as detailed in Report of Council	£735	£495
Excess of income for year	<u>£182</u>	<u>£184</u>

Balance Sheet at 30 June 1980

Endowment Fund as at 30 June 1979	£3556	£3417
Add Donation	5	—
Increase in cost value of re-investment	—	139
	<u>3561</u>	<u>3556</u>
Accumulated revenue as at 30 June 1979	2061	1807
Excess of income for year	182	184
Grant refunded	—	70
	<u>£5804</u>	<u>£5617</u>
Made up of :		
Investments at cost as below	£3151	£3151
Edinburgh and Paisley Building Society :		
Capital account	407	407
General account	2461	2201
Due by club's general funds	125	28
	<u>6144</u>	<u>5787</u>
Less Grants allocated but not yet paid	340	170
	<u>£5804</u>	<u>£5617</u>

Investments as at 30 June 1980

	Market value	At cost	At cost
£1220 9¼% Treasury Stock 1983	£1107	£1140	£1140
£440 British Printing Corporation—8½% unsecured Loan Stock 1993/98	257	441	441
500 St Andrew Trust Ordinary 25p	635	570	570
1952 M & G Equity Investment for Charities	3172	1000	1000
	<u>£5171</u>	<u>£3151</u>	<u>£3151</u>

EDINBURGH, 4th September 1980.—I have audited the foregoing revenue accounts for the year to 30 June 1980, and the balance sheets 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) ROBERT CAVEN,
Chartered Accountant.

COUNCIL AND OFFICIALS OF THE CLUB FOR SESSION 44

Hon. Presidents Sir Charles G. Connell, W.S., LL.D., F.R.S.E.; Sir Arthur B. Duncan; W. J. Eggeling, C.B.E., B.Sc., F.R.S.E.; Professor V. C. Wynne-Edwards, C.B.E., LL.D., M.A., D.Sc., D.Univ., F.R.S., F.R.S.C., F.R.S.E., F.I.Biol.

President Miss Valerie M. Thom.

Vice-President Dr Ivan T. Draper.

Law Agent D. G. Andrew, W.S.

Council (elected at AGM) A. Anderson, J. M. S. Arnott, D. L. Clugston, Mrs H. Halliday, R. H. Hogg, T. Irving, Dr D. R. Langslow, B. Stewart, Dr I. R. Taylor, Hon. D. N. Weir. **Young Member** (elected by Council) J. M. Dickson.

Branch Representatives (elected by their Branch) A. Anderson (Aberdeen); R. H. Hogg (Ayr); R. T. Smith (Dumfries); Dr J. J. D. Greenwood (Dundee); L. W. G. Alexander (Edinburgh); Dr D. N. Brooks (Glasgow); R. H. Dennis (Inverness); Mrs H. Halliday (New Galloway); J. S. Wiffen (St Andrews); H. Robb (Stirling).

STAFF

Secretary, Treasurer and Business Editor Major A. D. Peirse-Duncombe.

Editor and Bookshop Manager D. J. Bates.

Membership Secretary Mrs R. D. Smillie.

Hon. Treasurer and Librarian W. G. Harper.

Bookshop and Clerical Mrs H. L. Harper, Mrs D. J. Ridley, Miss H. Barul.

BRANCH AND GROUP OFFICE BEARERS

Aberdeen Chairman, B. Stewart; Vice Chairman, S. M. D. Alexander; Secretary, A. Duncan; Committee, T. D. H. Merrie, G. Rebecca, L. Steele.

- Ayr** Chairman, R. H. Hogg; Vice-Chairman, D. A. Smith; Secretary, J. Miller; Committee, J. Burton, B. C. Forrester, Dr R. Hissett, Mrs E. M. Hissett.
- Dumfries** Chairman, Dr N. E. Armstrong; Vice-Chairman, Dr E. C. Fellowes; Secretary, J. W. Barclay; Committee, W. Austin, Miss A. MacDonald, R. T. Smith, R. M. Wright.
- Dundee** Chairman, B. M. Lynch; Vice-Chairman, P. A. Kemp; Secretary, Dr K. M. Watson; Committee, F. V. Ellmore, Mrs J. A. R. Grant, B. Pounder, D. B. Thomson.
- Edinburgh** Chairman L. W. G. Alexander; Vice-Chairman, I. V. Balfour-Paul; Secretary, S. R. D. da Prato; Committee, Mrs L. M. Brown, J. M. Dickson, Mrs E. Ferro, P. W. G. Marriott, J. B. Murray.
- Glasgow** Chairman, Dr D. N. Brooks; Vice-Chairman, H. Galbraith; Secretary, S. N. Denney; Committee, D. Carnduff, Dr J. T. Knowler, C. E. Palmer, W. S. Taylor.
- Inverness** Chairman, R. H. Dennis; Vice-Chairman, R. L. Swann; Secretary, Mrs E. M. McQuarrie; Committee, R. A. Broad, J. Carruthers, D. B. McGinn.
- New Galloway** Chairman, Mrs H. S. C. Halliday; Vice-Chairman, Miss J. E. Howie; Secretary, Dr G. A. Fleming; Committee, J. Aitken, Admiral Sir Nigel Henderson, R. E. S. Wass, Rev. G. Yeo.
- St Andrews** Chairman, J. S. Wiffen; Secretary, Miss D. E. Rowling; Committee, Dr R. W. Byrne, T. W. Dougall, P. K. Kinnear, Lt. Cdr. E. F. B. Spragge.
- Stirling** Chairman, H. Robb; Vice-Chairman, C. E. Barth; Secretary, A. B. Mitchell; Committee, W. R. Brackenridge, J. Gearing, R. L. Gooch, Miss M. H. Knox.
- Thurso** Chairman, Mrs P. M. Collett; Secretary, S. Laybourne.
- Wigtown** Chairman, Dr P. G. Hopkins; Secretary, G. Sheppard; Committee, D. L. Irving, G. Shaw.

COMMITTEES

- Management** Miss V. M. Thom (Chairman), D. G. Andrew, J. M. S. Arnott, Dr I. T. Draper, M. K. Hamilton.
- Library** A. T. Macmillan (Chairman), Ritchie Seath (Hon. Librarian), D. L. Clugston, Dr J. J. D. Greenwood, P. W. G. Marriott, Dr I. D. Pennie, Mrs Irene Waterston.
- Editorial** A. T. Macmillan (Chairman), J. M. S. Arnott, D. L. Clugston, R. H. Dennis, F. D. Hamilton, S. R. D. da Prato, Miss V. M. Thom.
- Research** Dr I. R. Taylor (Chairman), A. W. Colling, R. H. Dennis, Dr J. J. D. Greenwood, Dr D. R. Langslow.

CLUB REPRESENTATION

- British Section, International Council for Bird Preservation** : F. D. Hamilton, Dr D. R. Langslow.
- International Wildfowl Research Bureau, Duck Working Group** : B. Pounder.

HONORARY MEMBERS

- Dr John Berry, William Brotherston, Maxwell Hamilton, Dr Ian Pennie, Mrs Irene Waterston, Donald Watson.

NOTICES

DUMFRIES WEEKEND

The annual weekend excursion to the Solway goose grounds has been arranged with the County Hotel Dumfries, from Friday, 20th to Sunday, 22nd February 1981.

Accommodation: inclusive terms £25 (including service charge and V.A.T.) as follows: bed on Friday 20th; breakfast, packed lunch, dinner and bed on Saturday 21st; breakfast and packed lunch on Sunday 22nd. Dinner on Friday night is £5.50 extra per person (including service charge and V.A.T.). A limited number of rooms with private bathrooms are available for the additional charge of £2.00 per night.

Members may bring guests and should book direct with the Manager, County Hotel, Dumfries (tel. 5401), notifying him that they are attending the Club excursion. Members should also advise the Hotel in advance if they require Dinner on the Friday night.

Those not staying at the County Hotel are invited to attend an informal meeting at the Hotel on Friday at 8.30 p.m., when details of the weekend excursions will be announced. An informal programme of slides will be shown on the Saturday evening. Members or guests who may have slides of interest are asked to bring them to the Hotel, and to contact the Club Secretary on the Friday evening to discuss their inclusion in the programme. A selection of books from the Bird Bookshop will be taken to the Hotel for sale during both evenings. It is advisable to bring warm clothing, gum boots if possible, and thermos flasks for the excursions.

ARGYLL WEEKEND

The Stirling branch intend to repeat their Argyll weekend based at a country cottage near Ford in early March 1981. Accommodation is limited. The charge will depend on the number attending. Anyone interested should contact the Stirling branch secretary, Sandy Mitchell, 10 Kenilworth Court, Bridge of Allan, Stirlingshire FK9 4EJ. Tel. 078-683 2461 (please send sae if writing).

DUMFRIES BRANCH SECRETARY

The new secretary, elected at the Branch AGM in September is J. W. Barclay, Jerona, Robb Place, Castle Douglas, Kirkcudbrightshire (tel. 0556 2909).

INVERNESS BRANCH A.G.M.

The Inverness Branch AGM will take place on 31 March 1981 and not as shown in the syllabus. Venue and time are unchanged.

INVERNESS BRANCH - WINTER EXCURSIONS

Saturday 14 February 1981 BEAULY FIRTH. Leader Bob Swann. Contact Branch Secretary for departure time and location.

Sunday 29 March BURGHEAD and FINDHORN. Leader Derek McGinn. Leave Cathedral car park, Inverness 9 am.

Both excursions take lunch and tea. Names to and further details from Branch Secretary: please state if car seats are required or available (sae if writing).

Weekend Friday 1 to Monday 4 May Details will be announced later.

Branch News

Glasgow Branch outing to lure Storm Petrels at Portencross. At midnight on 1st August, a night of monomorphous placidity, the mysterious west coast sect known as the Procellarians assembled on the foreshore at Portencross to witness the great manifestation. After a minute or two of invocation the 27-strong sect experienced a materialization. Great praises rang out in the still air and flashguns popped. After an hour or so there was a second coming, this time perhaps sent to us on this special occasion by the great Hydrobatean who exists in misty Kintyre and who bountifully bestows his messengers upon us. Staunch (or should it be devout?) Procellarians who remained until the fourth hour witnessed a third, fourth and fifth coming. At this hour a wind sprang up and the manifestations vanished into the inky darkness; so too did the Procellarians. A unique, chastening and oily experience.

B. ZONFRILLO

[We endeavour to cater for all tastes.—ED.]

Current Notes

These notes include unchecked reports and are not intended as a permanent record, nor will they be indexed. Please send reports via local recorders at the end of March, June, September and December.

Stray summer records—**White-tailed Eagle** 2 (ad & imm) O Heb Jul-Aug. **Peregrine** 5 sites Shetland; 4 pairs bred. **Quail** max 7 Fair Isle; calling North Uist (O Heb) 28 Jul. **Greenshank** bred Shetland (probably 1st ever). **Glaucous Gull** did not breed Shetland after one hybridizing with Herring Gull 1975-9. **Snowy Owl** in Shetland 2 ♀♀ moved from Fetlar to Unst in May, the remaining ♀ laid an egg on 2 Jun which disappeared on 4 Jun.

Westerly winds from 21 August brought in shearwaters and a Bonaparte's Gull. Easterlies on 30 August resulted in an influx of Ruffs, a passage of Great Skuas, and falls of chats, warblers and flycatchers. Westerly gales in mid September fetched in a Cory's Shearwater, Storm and Leach's Petrels, three Buff-breasted Sandpipers and four Sabine's Gulls. Easterlies again on 22-23 September produced good falls of passerines, although some areas missed out because of fog. Fair Isle reported its best late August and September for migration for years, and did rather well for buntings.

Cory's Shearwater Minch (O Heb) 19 Sep. **Great Shearwater** Troon (Ayr) 21 Aug; 2 Fair Isle 23 Aug. **Sooty Shearwater** rather few in North Sea but 3 off Corsewall Point (Wig) 30 Aug and again 13-14 Sep. **Manx Shearwater** 4,000 Turnberry Point (Ayr) 28 Aug; one inland Westwater (Peeb) 7 Sep. **Storm Petrel** 5 trapped Isle of May 9-16 Aug; one Sanda (Arg) 6 Jul had been ringed Isle of May 10 Aug 1979; 30 off Corsewall Point 14 Sep. **Leach's Petrel** 11 Corsewall Point 13-14 Sep; one Forties Field (North Sea) Sep/Oct. **Surf Scoter** Blackdog (Aber) from late Jul, 2 in late Aug; Harris (O Heb) 8 Sep. **Smew** Langbank (Renf) Aug (for 2nd year). **Honey Buzzard** Beatrice Field (Moray Firth) late Sep. **Marsh Harrier** North Ronaldsay (Ork) late Sep. **Osprey** Fair Isle 8 Sep. **Eleonora's Falcon** Erskine Bridge (Renf) 18 Aug (1st Scottish, 2nd British record if accepted). **Grey Plover** 282 Aberlady (E Loth) 7 Sep. **Temminck's Stint** Fair Isle 12 Aug; Fife Ness 29 Aug. **White-rumped Sandpiper** Musselburgh (Midl) 6-12 Aug. **Buff-breasted Sandpiper** Irvine (Ayr) 13 Sep; Lewis (O Heb) 14 Sep; Fair Isle 17-20 Sep. **Ruff** widespread influx 30 Aug-Sep, max 60 Fife Ness, 51

Linwood (Renf), 39 Stenness (Ork). **Jack Snipe** 12 Fair Isle 27 Sep. **Grey Phalarope** Brims (Caith) 27 Jul; North Ronaldsay Sep; Forties Field 1-3 Oct, also **phalarope sp** 9 Oct. **Long-tailed Skua** Seafield (Midl) 6 Oct. **Great Skua** 120N Barns Ness 30 Aug; 13W Newhaven (Midl) 16 Sep. **Sabine's Gull** 2 off Corsewall Point and one Barassie (Ayr) 14 Sep; inland Melrose (Rox) 26 Sep. **Bonaparte's Gull** Barassie 22 Aug. **Ross's Gull** Barra (O Heb) 5 Jul. **Roseate Tern** one off Corsewall Point 14 Sep. **Ring-necked Parakeet** 4W Aberlady 13 Aug (1st Scottish record?—and, we hope, the last). **Kingfisher** Benbecula (O Heb) 21 Aug. **Wryneck** few—max 5 Fair Isle 23 Sep. **Short-toed Lark** Fair Isle 18 Aug, 21 Sep. **Richard's Pipit** Isle of May 22 Sep. **Tree Pipit** 60 Fair Isle 23 Sep. **Meadow Pipit** 1,500 Fair Isle 4 Sep; 1,000 Isle of May 22 Sep. **Red-throated Pipit** Fair Isle 20-24 Sep. **Yellow Wagtail** 4 Guardbridge (Fife) 16-27 Aug; 5+ St Abbs (Ber) 30 Aug. **Dunnock** 120 Fair Isle 23 Sep. **Robin** 550 Fair Isle 23 Sep. **Redstart** 30+ St Abbs 30 Aug; 70 Fair Isle 23 Sep. **Whinchat** 80 Fair Isle 30 Aug. **Wheatear** 200 Fair Isle 25 Sep. **Ring Ouzel** 120 Fair Isle 23 Sep. **Fieldfare** 1st Fair Isle 15 Aug. **Song Thrush** 50+ Isle of May 22 Sep; 1,100 Fair Isle 23 Sep. **Redwing** 1st Fair Isle 24 Aug, 400 on 23 Sep; 80+ Isle of May 22 Sep. **Red Warbler** 4 Fair Isle 30 Aug, six 23 Sep; 3 Isle of May 21-22 Sep. **Icterine Warbler** 9 Fair Isle 31 Jul-19 Sep, max 3 on 30 Aug; 2 Isle of May early Aug and early Sep; Fife Ness 23 Sep; 2 St Abbs 1 Sep. **Melodious Warbler** Fair Isle 22 Sep. **Barred Warbler** Fair Isle max 7 on 30 Aug, six 11 Sep; Isle of May early Sep; 3 Orkney Sep; St Abbs 1 Sep, 11 Oct; Pease Bay (Ber) 14 Sep. **Garden Warbler** 28 Fair Isle 30 Aug, 40 on 11 Sep. **Blackcap** 60 Fair Isle 23 Sep. **Arctic Warbler** Fair Isle 11-14 Sep, 21 Sep. **Yellow-browed Warbler** singles Orkney, Forties Field and Isle of May late Sep. **Bonelli's Warbler** Drums (Aber) 22-24 Sep (4th Scottish). **Willow Warbler** 350 Fair Isle 30 Aug, 400 on 11 Sep. **Goldcrest** Fair Isle from 28 Aug, 75 on 23 Sep; 45 St Abbs 15 Oct. **Firecrest** 3 St Abbs 30 Aug. **Red-breasted Flycatcher** 7 singles Fair Isle-St Abbs 14 Aug-28 Sep, including Forties Field and one catching flies at Isle of May observatory window. **Pied Flycatcher** 50-100 St Abbs 30 Aug. **Red-backed Shrike** 8 Fair Isle-Isle of May-St Abbs 18 Aug-22 Sep. **Woodchat Shrike** Fair Isle 25-26 Aug, 4-5 Sep. **Rose-coloured Starling** Arbroath (Angus) c.9 Oct. **Chaffinch** 320 Fair Isle 23 Sep. **Brambling** 260 Fair Isle 23 Sep. **Siskin** 250 Fair Isle 20 Sep, 300 on 23 Sep; 150+ Isle of May during 20-27 Sep. **Scarlet Rosefinch** 14 Fair Isle 24 Aug-Sep, max 4 on 10 Sep; 7 Orkney 11-26 Sep; Isle of May 22 Sep. **Lapland Bunting** 25 Fair Isle 24 Sep, 27 Sep. **Snow Bunting** 1st Musselburgh 7 Sep. **Pine Bunting** Fair Isle 14 Oct (5th Scottish). **Yellow-browed Bunting** Fair Isle 14 Oct (1st Scottish). **Rustic Bunting** Fair Isle 14 Sep, 4 during 22-30 Sep. **Little Bunting** Fair Isle 6-7 Sep, 22 Sep-1 Oct. **Yellow-breasted Bunting** 6 Fair Isle 27 Aug-29 Sep, max two 30-31 Aug.

Late news

Black Stork Newton Wamphray (Dumf) 19 Oct. **Stonechat** one of the Siberian races Isle of May mid Oct. **Bean Goose** L Leven (Kinr) from 2 Oct. **Blue-winged Teal** 2 Caerlaverock (Dumf) mid Oct. **Temminck's Stint** Aberlady 17 Oct. **Brünnich's Guillemot** Fair Isle mid Oct (alive!). **Tengmalm's Owl** trapped Binscarth (Ork) 14 Oct. **Yellow-browed Warbler** 2 St Abbs late Oct. **Firecrest** St Abbs late Oct. **Rustic Bunting** Fife Ness late Oct.

D. J. BATES

WITHOUT COMMENT

'We looked carefully over the gulls roasting on the lower slopes of Oiseval above the camp and soon marked out... a Laughing Gull...'

—*Stornoway Gazette* 25 July 1980

What do you call a woodpecker with no beak?—A heid-banger.

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 £5, or £2 in the case of Members under twenty one years of age or Students under 25, who satisfy Council of their status as such at the times at which their subscriptions fall due. The Life subscription is £100. Family Membership is available to married couples and their nominated children under 18 at an Annual subscription of £7.50, or a Life subscription of £150. *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, Major A. D. Peirse-Duncombe, Scottish Centre for Ornithology and Bird Protection, 21 Regent Terrace, Edinburgh, EH17 5BT (tel. 031-556 6042).

APPLICATION FORM

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Proposed by

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(If you do not know any members who can propose or second you please leave blank)

Please detach and send with your subscription to The Club Secretary, Scottish Ornithologists' Club, 21 Regent Terrace, Edinburgh, EH7 5BT.

Notes—

1. Those entitled to draw the State old age pension may pay a reduced subscription of £3 (single) or £4.50 (family) on application to the Club Secretary.
2. Banker's Order and Deed of Covenant forms can be supplied by the Club Secretary.

Notices to Contributors

Papers, longer articles and short notes

1. The high cost of production and distribution means that it is of the utmost importance that contributions are concise, interesting and readable to justify their publication. Official reports originally prepared for other bodies usually need to be completely redrafted. Authors of papers are advised to submit a draft to an expert referee before offering it to the editor. Material is considered on the understanding that it is not being offered elsewhere.

2. Two copies should be sent, typed on one side only with double spacing and wide margins. Authors are urged to consult recent issues of *Scottish Birds* for style of presentation, in particular of headings, tables and references. Headings should not be in capitals nor underlined. Tables and figures must be designed to fit the page. Tables should be used sparingly and be self explanatory, and, like figure captions, typed on a separate sheet.

3. Short notes, if not typed, must be clearly written and well spaced.

4. English names of species (but not group names) of birds, other animals and plants, except domestic forms, have initial capitals for each word, except after a hyphen. English names and sequence of birds follow Voous (1973-7) 'List of recent Holarctic bird species' (*Ibis* 115: 612-638; 119: 223-250, 376-406). Scientific names are generally unnecessary for species in this list but they are required (underlined, with no brackets) for subspecies, species not in the list, and for other animals and plants, except domestic forms, where these receive significant mention.

5. Proofs are sent to all contributors and these should be returned without delay. Authors of papers and longer articles are entitled to 25 free copies of the journal but these must be requested when returning proofs. Extra copies can be supplied at cost.

6. Illustrations of any kind are welcomed, whether alone or to illustrate an article. Drawings and figures should be up to twice the size they will finally appear, in Indian ink, neatly lettered, on good quality paper separate from the text. Photographs, either glossy prints or colour transparencies, should be sharp and clear with good contrast.

Scottish Bird Report

1. Records should be sent to the appropriate local recorders, a list of whom is published regularly, but in cases of difficulty they can be forwarded by the editor.

2. These records should be on one side of the sheet only, well spaced and in species order, following the Voous sequence (see 4. above). The only exception is that Aberdeenshire and north Kincardineshire records should be in place and date order. Observers should consult previous reports for the sort of information required. To avoid duplication of records by the recorders, names of other observers present should be given where appropriate.

3. Notes for the year should be sent promptly, generally in early January, but some recorders prefer more frequent records and regular contributors are asked to consult local recorders about this. Reports of occasional visits to areas outwith the observer's regular territory, such as holiday lists, should usually be sent to recorders as soon as possible. Records of rarities, including species only locally rare, should be sent to recorders without delay.

4. The editor will be glad to receive, preferably via the local recorders, records of special interest for publication in *Current Notes*. Please send them at the end of March, June, September and December for publication in the issues following.

5. To save recorders' (often considerable) time and expense, correspondents should enclose a stamped addressed envelope or indicate that no acknowledgment is required.

WILDFOWL COUNTS IN SCOTLAND

For more than 20 years the task of organising the winter Wildfowl Counts in Scotland was undertaken by a succession of dedicated SOC members; first by Miss Rintoul and Miss Baxter, then by Miss Betty Garden and finally by Miss Valerie Thom. When Miss Thom resigned in 1971, no overall Scottish Organiser could be found to continue the work centrally, and so a number of Regional Organisers were appointed who deal direct with the Wildfowl Trust in Slimbridge. The Club agreed to be responsible for appointing Regional Organisers when necessary in future, and a copy of the counts for all parts of Scotland is maintained in the Club's Reference Library in Edinburgh.

A list of the Regional Organisers is given below, and anyone who is interested in helping with the counts is asked to write to their nearest Organiser. If there is none please contact Slimbridge.

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

Orkney P. Reynolds, Creyer Cottage, Evie, Orkney.

Wester Ross, Inner and Outer Hebrides A. Currie, Glaiseilean, Broadford, Isle of Skye, IV49 9AQ.

Outer Hebrides N. Buxton, 42 Aird, Tong, Isle of Lewis, Western Isles.

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

Inverness-shire, Easter Ross, Sutherland (East) C. G. Headlam, Dallachie, Fearn, Ross-shire, IV20 1TN.

Banffshire, Morayshire, Nairnshire J. Edelsten, 14 South High Street, Portsoy, Banffshire, AB4 2NT.

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

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

Perthshire (East) E. D. Cameron, Strathclyde, 14 Union Road, Scone, Perth, UH2 6RZ.

Argyllshire Vacant.

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

Clackmannanshire, Perthshire (West), Stirlingshire R. Keymer, N.C.C., 12 Hope Terrace, Edinburgh, EH9 2AS.

Dunbartonshire, Lanarkshire, Renfrewshire R. A. Jeffrey, 1a High Calside, Paisley, Renfrewshire.

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

Lothians R. W. J. Smith, 33 Hunter Terrace, Loanhead, Midlothian, EH20 9SJ.

Ayrshire A. G. Stewart, 31 St Andrews Avenue, Prestwick, Ayrshire, KA9 2DY.

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

Dumfriesshire, Kirkcudbright, Wigtonshire Vacant.

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Highland Birds—a relaxed course. Paul Croft **July 15-22**
Highland Birds—a strenuous course. Ted Green **July 22-29**
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