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Scottish Birds is the quarterly journal for SOC members, and is published in March, June, September and December annually.

Containing original papers relating to ornithology in Scotland, topical articles, bird observations, reports of rare and scarce bird sightings, alongside branch and Club-related news, our members tell us that *Scottish Birds* is one of the key benefits of belonging to the SOC. Its different sections have been developed to meet the wide needs of the birdwatching community, and the publication is renowned for its first-class photography.

An archive of the journal is available on the SOC website, where links can be found to other Club publications including the *Online Scottish Bird Report*.

More about the SOC...

On the one hand, a birdwatching club. Established in 1936, the Scottish Ornithologists' Club (SOC) is Scotland's bird club with 15 branches around the country and a growing membership of over 3,000. Through a programme of talks, outings, conferences and other events, it brings together like-minded individuals with a passion for birds, nature and conservation.

On the other, a network of volunteers across Scotland, gathering vital, impartial information about our wild birds. The data we collect is made available to conservationists, planners and developers, and is used by organisations such as the RSPB, as one of the first points of reference in informed conservation planning.

Club Headquarters can be found at Waterston House, Aberlady, overlooking the scenic local nature reserve. Housed within, is the George Waterston Library, the largest ornithological library in Scotland, and the Donald Watson Gallery - one of the jewels in the Waterston House crown, exhibiting wildlife art all year-round.

Join us...

As well as receiving *Scottish Birds* every quarter, SOC members have access to a programme of talks and outings across Scotland and affiliation to a local branch of the Club. New members will receive a welcome pack on joining, plus a thank you gift if paying their subscription by direct debit.

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Adult (aged 18 and over)	£	36.00	
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For more information about the Club and its activities, including details of how to join, please visit www.the-soc.org.uk or contact Waterston House on 01875 871 330, or email membership@the-soc.org.uk

Scottish Birds 42:1 (2022)

Scottish geese - expect the unexpected

Plate 1. Ian Bainbridge, the easy part of the WeBS count, Fleet Estuary January 2022. © *Carole Bainbridge*

This winter has seen one of the biggest traumas affecting a Scottish bird population in recent times, with a major outbreak of avian influenza in the Svalbard-breeding Barnacle Geese which winter on the Solway. Starting in late November, it caused huge mortality during December, and the latest estimates are that more than one third of the population (16,000 of the 43,000) may have died. By mid-January mortality seems to have slowed, and thankfully the outbreak does not seem to have spread substantially into other species, although a small number of Pink-footed Geese and Whooper Swans were also recorded as affected during December. While these are shocking statistics, we can be hopeful that the population will recover, as it did from its all-time low of around 300 birds in 1949. Doubtless, collecting carcasses has been a grisly task for the folk doing so, but a huge amount of information will be gleaned from the ringing recoveries and from the careful counts which have been done for decades and will continue. Does bird flu strike at random, or does it target older birds, or less successful breeders (less fit?). These are just two interesting questions to analyse.

I am reminded of the times when I chaired the Scottish Government's Goose Science Advisory Group, when we often said that with geese you should expect the unexpected. In the 1990s, one scientific report said the Solway Barnacle Goose population was highly unlikely to exceed around 20,000; no-one told the geese! Since the turn of the century, the Icelandic-breeding Greylag Goose population has moved its major wintering area from central and southern Scotland to Orkney: we see far fewer Greylags here these days, and Orkney sees over 60,000 birds, a huge contrast to the few thousand of twenty years ago. Over time, the Greenland White-fronted Goose population has risen with the inception of protection measures, then fallen, possibly linked to the north Atlantic oscillation, a weather system which can cause heavy spring snow in west Greenland, and also perhaps to the spread of Greater Canada Geese into their breeding areas. The Pink-footed Goose population continued to rise steadily until 2015 when it topped 500,000 birds, but may now have reached a plateau. Strangely, this species, our commonest wintering goose, is among the least controversial species as it ranges widely in winter, concentrating on spent crops such as sugar beet in East Anglia.

For all of these species, what we know about population trends is substantially due to the wonderful network of volunteer goose counters, including many SOC members, so tributes to all of them. We're out to do the WeBS count for 'our' parts of the Fleet later today; it's enjoyable, good for the soul and contributes valuable long-term information. If you don't do it yet, why not join in?

Finally, this is my last President's foreword for SOC. I'm sad to be stepping down after only three years, but my chronic fatigue is preventing me from participating in the way which is needed, so it's better for the Club to find a new President, and for me to concentrate on my health. I thank everyone who has helped me in the last three years, and wish SOC and my successor all the very best. I will always be a strong supporter of the Club and what it does for Scottish ornithology.

Ian Bainbridge, SOC President

Plate 2. Adult male Merlin, Mid Deeside, North-East Scotland, June 2017. © *Bill Patterson*

Merlin breeding phenology, egg size, clutch size and productivity on Deeside, North-East Scotland in relation to area and land-use

G.W. REBECCA, B.L. COSNETTE, A. DUNCAN, A.G. PAYNE & L.D. STEELE

Aspects of Merlin breeding biology were studied at three areas on Deeside, North-East Scotland, covering 1980–2003. During 1980–94 one of the areas was afforested, mainly with non-native conifers, allowing comparison with the two other moorland areas, managed primarily for commercial Red Grouse shooting. Merlins declined at the afforested area, from six pairs in the 1980s to one pair in 1999–2003 (subsequently zero pairs 2004–20) and breeding parameters there may have been detrimental in comparison to the Merlin's status at the moorland areas. To examine these possibilities, we analysed and compared the timing of breeding (phenology) and egg and clutch sizes and productivity (fledged young per breeding attempt) for each area. The first egg laying dates from first clutches were similar at each study area and there was no temporal trend evident at either area. Egg volume was smaller at the afforested area but the difference was not significant. Average clutch size overall was similar at the different study areas but decreased significantly at the afforested area over time. Both 'grouse-moor' areas produced enough young, based on an assessment review of previous studies, to maintain stability at least, with the Mid-Upper Deeside area by far the most productive. In contrast, the afforested area at Lower Deeside had a higher complete failure rate, produced fewer young than necessary to maintain numbers and was acting as a 'sink habitat' during the study period. This study has shown that commercial conifer afforestation was a substandard habitat for Merlins in North-East Scotland.

Introduction

During the 19th century, Merlins *Falco columbarius* bred in over 100 counties in Britain, covering much of Scotland, Wales and north England - tree nesting (using old nests of other species) was widespread then, but Merlins must also have adapted, following historical native deforestation, to nesting on crags and on the ground (e.g. Thompson *et al.* 1988, Holloway 1996). In Shetland, Orkney, the Outer Hebrides and parts of Caithness and Sutherland ground or crag nesting would have been normal for Merlins, as extensive forest cover never existed in these areas (Thompson *et al.* 1988). The British countryside changed dramatically during the 19th century, with fertile low ground being converted to agriculture and large areas of the uplands used for sheep rearing (Stoate 1995). Concurrently, commercial game shooting, targeting mainly Red Grouse *Lagopus lagopus* and Red Deer *Cervus elaphus*, developed on a huge scale over the uplands (Petty & Avery 1990). As part of the overall management for upland sheep and grouse, gamekeepers reduced predators, which probably improved the suitability of these areas for Merlins (Brown & Bainbridge 1995). However, the maintenance of deforested land was not uniform and, in Scotland, some large areas of conifers were planted in Aberdeenshire, Perthshire and Speyside and were probably the source for much of the valued semi-natural pinewood currently in these areas (Petty & Avery 1990).

Following the First World War (1914–18) forest cover in Britain was at its lowest, at less than 5% (Avery & Leslie 1990). In 1919, a major turning point in British forestry saw the formation of the Forestry Commission, a new state-funded government body. Large areas of the uplands were then afforested with non-native conifers planted at high density (NCC 1986). Such rapid change, if extensive, can negatively affect territory quality in certain open-country birds. For example, in South-west Scotland, decreases in Raven *Corvus corax* and Golden Eagle *Aquila chrysaetos* were believed to be due to a loss of foraging habitat following widespread coniferous afforestation (Marquiss *et al.* 1978, 1985). It was reasoned above that Merlins reacted to historical clearance of native woodlands by using the successional open country habitat. More recently, Merlins adapted to extensive commercial conifer plantations in Wales (Parr 1991), North-east England (Little & Davison 1992) and South-west Scotland (Orchel 1992) by again using old tree nests of other species as breeding sites. However, in 1993–2004, Merlins were not utilising conifer plantations on a similar scale throughout their British breeding range, continuing to use moorland habitats for the vast majority of breeding attempts (Rebecca 2011).

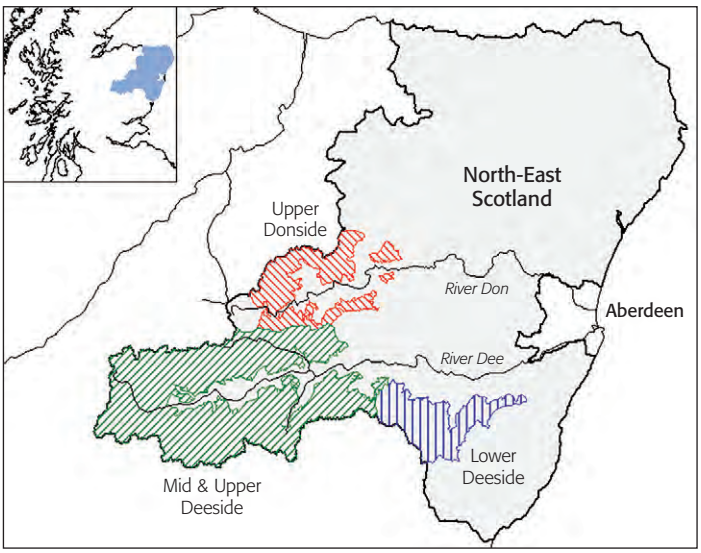

Figure 1. Merlin study areas in Aberdeenshire, North-East Scotland. The Mid and Upper Deeside and Lower Deeside areas are the subjects of this paper, with the latter detailed in Figure 2. Around 45 breeding areas were monitored annually on Deeside (e.g. Cosnette & Rebecca 1997).

Merlin breeding ecology has been studied in North-East Scotland since 1980. In the 1980s, clutch size averaged 4.4 from 195 nests, with maximum productivity averaging 2.2 fledged young for 232 breeding attempts, and the population was considered relatively stable, albeit at low density (Rebecca *et al.* 1992). At two Aberdeenshire study areas, Lower Deeside and Upper Donside (Figure 1) breeding area occupancy fluctuated in the 1990s. At the former area, commercial

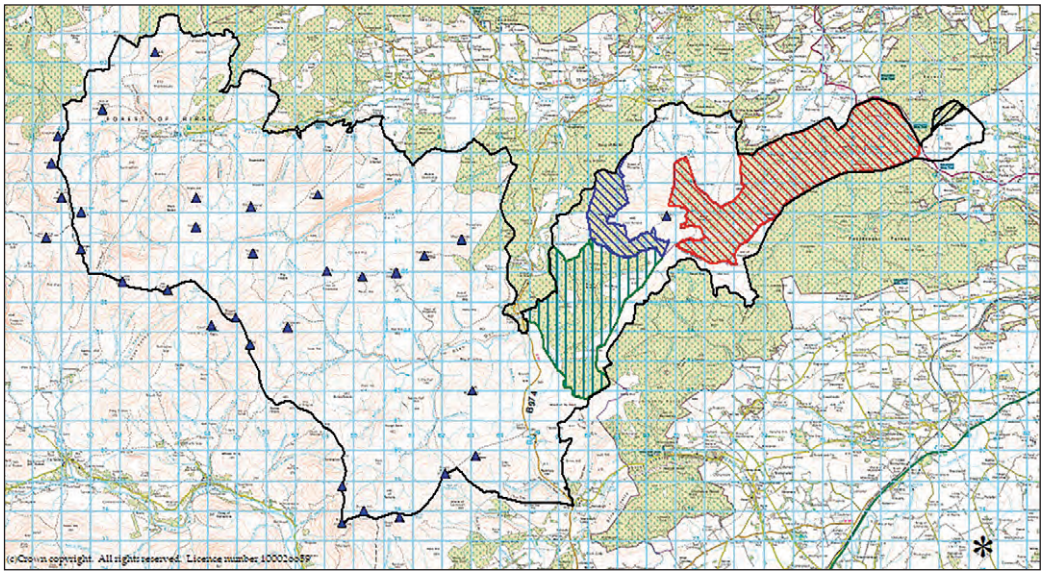

Figure 2. The Lower Deeside Merlin study area Aberdeenshire, North-East Scotland, and zones afforested during 1980–94. **Red hatch** planted 1980–85, **blue hatch** planted 1985–89, **black hatch** planted 1986–87 and **green hatch** planted 1991–94; collectively described as Lower Deeside forestry (LDF). The remainder of the study area was primarily managed for the production of Red Grouse (Watson & Millar 1976); described as Lower Deeside managed grouse-moor (LDM). Triangles are spot heights over 500 m and indicate plateau areas. The 26 Merlin breeding areas within this study area were all effectively below the plateau areas (Rebecca *et al.* 2022) Grid squares are 1-km².

afforestation during 1980–94 was linked to a decline, and, at the latter, intensive moorland management (extensive heather burning and apparent human interference) also led to a decline, but numbers recovered there by 2000 (Rebecca & Cosnette 2003). However, there was no recovery at the Lower Deeside forestry zones (LDF, Figure 2) and that population declined from six pairs in the early 1980s to one pair in 1999–2003 then zero in 2004–20 (Rebecca *et al.* 2022). In addition, breeding area occupancy and productivity was compared between the LDF area and Lower Deeside managed grouse-moor area for 1982–2020 (LDM, Figure 2). At the LDM area in 1982–2020 occupancy was stable with productivity adequate, at least, to maintain numbers at 2.4 fledged young per breeding attempt; whereas at the LDF area productivity, at 1.8 fledged young per breeding attempt, was below the level predicted to maintain stability (the calculated estimate considered to conserve stability, from previous Merlin studies, is 2.0 fledged young per breeding attempt - Petty 1995).

In relation to the abandonment of Merlin breeding areas at the LDF area, it may have been that the transition from moorland to dense conifer plantations negatively affected certain aspects of breeding ecology, for example, by changing potential prey availability (Rebecca 2020) or by influencing parameters such as the timing of breeding, egg and clutch sizes or breeding success. The timing and quality of breeding by some birds is determined by the body condition of individual females (Perrins 1970) for example, food availability was shown to influence egg-laying date and clutch size in the Kestrel *F. tinnunculus* (Dijykstra *et al.* 1982). To examine the theory of Merlin breeding parameters being negatively affected by land-use change (afforestation) we compared first egg-laying date from first clutches, average egg volume per clutch, clutch size and productivity (fledged young per breeding attempt) from three study areas at Deeside covering 1980–2003, and assessed temporal trends where relevant. This allowed further comparison of productivity from the LDF and LDM areas with the Mid and Upper Deeside area managed primarily as 'grouse-moor' (MUDM) over the same duration (Figures 1 & 2). All nest visits and photographs were covered by the appropriate Schedule 1 licences.

Methods

Study areas and nest locating

At the LDF zones combined, the habitat prior to afforestation at four breeding areas (12 nests) was either unmanaged moor or scrub. These nests were within 400 m of extensive post-thicket conifer plantations, likely to influence breeding success, since plantations are known to harbour potential predators of Merlin and their nests (e.g. NCC 1986, Rebecca 1998). Because of this, we included this data in the LDF area with the remainder of the Lower Deeside study area mainly managed for Red Grouse (LDM area, Figure 2). The MUDM study area encompassed the vast majority of the remaining apparently suitable Merlin breeding habitat within the River Dee catchment (Figure 1).

Suitable breeding habitat was watched and/or searched for the presence or signs of Merlin based on conventional guidelines (e.g. Cramp & Simmons 1980, Feldsine & Oliphant 1985) and area specific knowledge (Rebecca *et al.* 1992, Rebecca *et al.* 2022). Merlins often use distinct perching or plucking places near their nest such as boulders, fallen trees, stumps, fence posts, hummocks, shooting butts and bare areas of ground; and signs left include 'whitewash' droppings, regurgitated pellets, prey remains and moulted feathers (plates 3–6). As such, checks of suitable habitat to search for signs were done during April–July (the main period when breeding areas are occupied). Pinpointing nests was possible following noisy food exchanges, when the male often covers the eggs or guards the chicks while the female feeds or plucks prey; or when the adults changed over incubation duties (plate 7). Further, Merlin often noisily mob and try to distract potential predators that are in an occupied breeding area and the intensity of this behaviour can often indicate the general area of a nest (Newton *et al.* 1978, Rebecca *et al.* 1992). Searches and watches were applied opportunistically as required.

Plate 3 (left). Merlin perching/plucking boulder and 'whitewash' droppings, Lower Deeside, North-East Scotland, May 2018. © *Graham Rebecca* **Plate 4 (upper right).** Merlin perching/plucking hummock and moulted feathers, cached prey and 'whitewash' droppings, Lower Deeside, North-East Scotland, June 1982. © *Graham Rebecca* **Plate 5 (lower right).** Merlin perching/plucking boulder and prey remains, Lower Deeside, North-East Scotland, June 1985. © *Graham Rebecca*

Plate 6. Adult male Merlin, Lower Deeside, North-East Scotland, June 1994. © *the late Phil Newman*

Egg-laying dates

Merlin clutch size is usually 3–5 eggs, laid at two-day intervals and incubation normally begins on the second last egg. The incubation period is usually 28–29 days per egg and the young fledge at 25–32 days (Newton *et al.* 1978, Cramp & Simmons 1980, GWR & BLC pers. obs.). Using this knowledge, the dates of the first egg laid were calculated using the following criteria. **The laying-in period:** this was when a nest was located with a partial clutch. If an egg was wet it was judged as laid that day, otherwise the last egg was presumed laid the previous day. By counting back two days per egg for the remainder of the clutch, the first egg-laying date was estimated to within a day. **The hatching stage:** this was when the eggs were starred or chipping and the furthest developed was judged to hatch that day, or in 1–2 days. If a chick was wet, or dry and its size equivalent to egg volume, it

Plate 7. Female Merlin at nest, about to feed chicks, Lower Deeside, North-East Scotland, June 1986. © *Graham Rebecca*

would have hatched that day. If the chicks were about twice egg volume, they were estimated to be 2–3 days old. By counting back 29 days from the calculated hatch date of the oldest chick, and as for the laying-in period, the first egg date could be estimated to within 1–3 days. **The ringing stage**: when the laying-in period or hatching stage was not known, sketches from photographs of known age chicks (Figure 3) were compared with broods and their age estimated, with their development further compared with measurement graphs (Picozzi 1983). The oldest chick could then be identified and back counting done, giving an estimated first egg date to within 2–3 days. **The fluttering or recently fledged stage**: before young Merlin fledge, they can flutter or fly short distances at 24–26 days (Dickson 2003, Haug 2017, Figure 3). At that stage, they can allow a close approach or can be viewed with binoculars to assess down loss and feather development (plates 8–9). Comparison can then be made with other recently fledged young of known age and back counting done. Although probably not as accurate as the previous criteria, this method estimated the first egg date to within 2–4 days. If the recently fledged young are confident flyers, it is not reliable to assess their age, as they can remain dependant on their parents for around 2–3 weeks after fledging. The accuracy of the calculations therefore varied between 1–4 days (or a maximum of ± 1.5 days) depending on the criterion used. Any proven or highly probable repeat clutches (judged by behaviour and signs left by the Merlins) were not included in the phenology analysis. This reduced potential bias linked to study area predation levels, and there has been much recent interest in the timing of first clutches of birds in relation to global climate change (e.g. Crick *et al.* 1997).

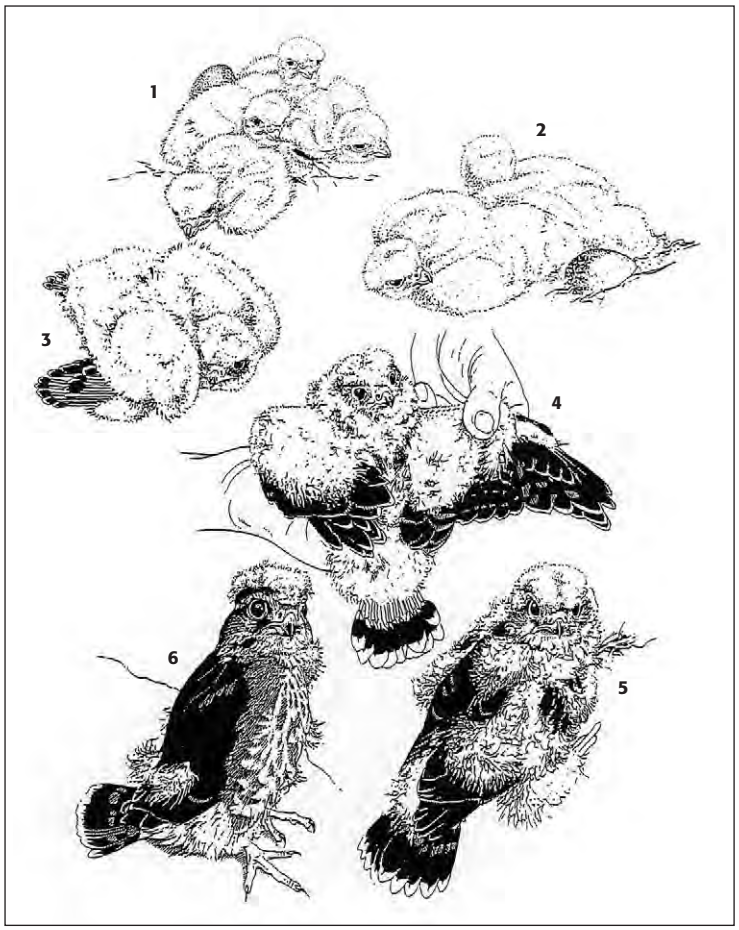

Figure 3. Sketches of nestling Merlin of known age from photographs by GWR. **1:** 3–5 days, short white down, egg tooth still present. **2:** 6–7 days, longer greyish down. **3:** 11–15 days, primary and tail feathers sprouting, sexing sometimes difficult. **4:** 17–18 days, easy to handle and sexing reliable, males <200 grams, females >200 grams. **5:** 21–22 days, rapid down loss and feathers forming well, males usually ~200 grams, females usually >220 grams. **6:** 24–26 days, capable of short flights (see Haug 2017, plates 8–9). © *Keith Brockie*

Clutch size, egg size and egg volume

Clutch size was determined if a nest was visited twice during incubation, or if the signs on the first visit indicated that incubation had begun and depletion was not suspected. After incubation starts, moulted body feathers from adults can attach to vegetation around the nest. As incubation progresses the adults start to moult primary, secondary and tail feathers and these can be found at the nest or at nearby plucking or perching sites (plate 4). Further, at ground nests, the adults nibble through many heather stalks. These clues all confirm that incubation has begun. From 1982, the length, and breadth at the widest point, of most eggs was measured to the nearest 0.1 mm using dial callipers. Egg volume in cm^3, was calculated using the formula: $el \times eb^2 \times K$, where *el* represented egg length and *eb* egg breadth, with *K* the constant 0.51, as devised by Hoyt (1979) and applicable to all eggs except those very pointed.

Productivity

The number of recently fledged young or young believed to have fledged was used to measure breeding performance. Most nests were visited to measure, sex and ring the young, when they were between 2½ - 3 weeks old (Figure 3, plate 10). When the expected number of fledged young were not seen or heard on a later visit, the nest and surrounding area was searched for casualties or signs of a predator (Rebecca *et al.* 1992). If no evidence of depredation was found, and down and/or faecal (whitewash) trails away from the nest were evident, the number of young ringed or expected to fledge, was taken as the fledged total (allowing relevant comparison with other Merlin studies in Britain, e.g. Rebecca 2011). Mean productivity per study area was assessed by dividing the total number of young fledged or expected to fledge, by the number of confirmed or probable breeding attempts, including nests that had failed earlier.

Statistical analyses

To compare parameters between study areas and land-use (afforestation and managed grouse-moor) a mixed procedure model was used (SAS 2001). We tested for differences in relation to area (LDF, LDM and MUDM; Figures 1 & 2) and land-use, using first egg-laying date from first clutches, average egg volume per clutch, clutch size and productivity (fledged young per breeding attempt) as dependent variables, with breeding site and year as random class variables. We also examined temporal patterns where relevant. Mixed models limit bias due to pseudo-replication, account for unequal or missing values and calculate the denominator degrees of freedom.

Results

Breeding phenology

The first egg-laying date was calculated for 360 nests during 1980–2003 (Table 1). There were 70 nests from the LDF area, 139 from the LDM area and 151 from the MUDM area. The first egg-laying range covered 43 days, from the 24–25 of April to 5 June. Ten definite and ten probable repeat nests were recorded (first egg-dates between 22 May and 5 June) but are not considered further (see Methods).

Table 1. The criteria used to calculate the first egg laying date for 360 confirmed Merlin breeding attempts on Deeside, North-East Scotland during 1980–2003 (full details in Methods).

Incomplete clutch	142
Hatching eggs or chicks 2–3 days	57
Biometrics, graphs and sketches	149
Nearly or recently fledged young	12

The mean first egg-laying dates for first clutches, standard deviations (sd), inter-quartile ranges and ranges were similar for each study area (Table 2) with no significant difference between land-use types ($F_{1,39} = 0.25$, $P = 0.623$). There was also no significant temporal change in the first egg-laying date at either area (LDF, $F_{1,49} = 0.03$, $P = 0.873$; LDM, $F_{1,128} = 0.04$, $P = 0.843$; MUDM, $F_{1,129} = 0.08$, $P = 0.784$). Combining the data gave a mean first egg-laying date for first clutches of 8 May ± 5.5 days sd (n 340) with the inter-quartile range covering the 4–5 May to 11 May (Table 2).

Table 2. Mean first egg-laying dates, standard deviations (sd), inter-quartile ranges and ranges of first clutches of Merlins from three study areas on Deeside, North-East Scotland during 1980–2003. LDF = Lower Deeside forestry; LDM = Lower Deeside managed grouse-moor; MUDM = Mid and Upper Deeside managed grouse-moor.

Areas	Number of clutches	Mean first egg-laying dates (sd)	Inter-quartile ranges	Ranges
LDF	65	9 May (4–14 May)	5–6 to 12–13 May	28 April to 23 May
LDM	130	8 May (2–14 May)	4–5 to 11–12 May	24–25 April to 21 May
MUDM	145	8 May (2–14 May)	4–5 to 11 May	24–25 April to 23–24 May
All Deeside	340	8 May (2–14 May)	4–5 to 11 May	24–25 April to 23–24 May

Table 3. Mean egg length and breadth (mm) and egg volume (cm^3) per clutch ± standard deviations of Merlin eggs from three study areas on Deeside, North-East Scotland during 1982–2003. LDF = Lower Deeside forestry; LDM = Lower Deeside managed grouse-moor; MUDM = Mid and Upper Deeside managed grouse-moor.

Areas	Mean egg lengths	Mean egg breadths	Number of eggs	Mean egg volume per clutch	Number of clutches
LDF	39.6 ± 1.5	31.3 ± 1.0	229	19.8 ± 1.7	54
LDM	40.0 ± 1.3	31.4 ± 0.9	527	20.1 ± 1.3	123
MUDM	40.0 ± 1.6	31.5 ± 0.9	463	20.3 ± 1.1	104
All Deeside	39.9 ± 1.5	31.4 ± 0.9	1219	20.1 ± 1.3	281

Table 4. Overall mean clutch sizes and productivity ± 95% confidence intervals of Merlins from three study areas on Deeside, North-East Scotland during 1980–2003. Sample sizes in brackets. LDF = Lower Deeside forestry; LDM = Lower Deeside managed grouse-moor; MUDM = Mid and Upper Deeside managed grouse-moor.

	Study areas and mean clutch sizes and productivity			
	LDF	LDM	MUDM	All Deeside
Clutch sizes	4.3 ± 0.2 (59)	4.3 ± 0.1 (136)	4.4 ± 0.1 (147)	4.4 ± 0.6 (342)
Productivity	1.8 ± 0.4 (81)	2.3 ± 0.3 (168)	2.7 ± 0.2 (215)	2.4 ± 1.8 (464)

Egg sizes, egg volume per clutch and clutch size

The mean measurements of egg length and breadth, egg volume (cm^3) and sd per clutch from 281 Merlin nests at the three study areas in 1982–2003 are shown in Table 3. There was a tendency for eggs to be smaller at the LDF area but there was no significant difference in egg volume between land-use types ($F_{1,36} = 2.09$, $P = 0.157$). Combining all of Deeside the mean egg volume per clutch was 20.1 ± 1.3 sd cm^3.

Mean clutch sizes ± 95% confidence intervals, for the three areas in 1980–2003 are shown in Table 4. Overall, there was virtually no difference between areas giving a mean for all of Deeside of 4.4 ± 0.6 sd per clutch (n 342, plate 11). There was also no significant temporal change in clutch size at the LDM and MUDM areas ($F_{1,133} = 0.3$, $P = 0.588$; $F_{1,103} = 0.18$, $P = 0.674$) but there was at the LDF area (Figure 4).

Productivity

Mean productivity ± 95% confidence intervals, for 1980–2003, ranging between 1.8 ± 0.4 at the LDF area, 2.3 ± 0.3 at the LDM area and 2.7 ± 0.2 at the MUDM area are shown in Table 4. Interpreting these results appears straightforward, but there was no statistically significant difference in productivity between land-use types ($F_{1,38} = 1.27$, $P = 0.268$). However, when combining the LDF and LDM areas and comparing with the MUDM area there was a significant difference ($F_{1,37} = 6.73$, $P = 0.014$), with the better productivity at the MUDM area showing a highly significant positive increase over time (Figure 5). Breeding success correlated with complete failure rate at the study areas with the latter ranging from 42% at the LDF area, 31% at the LDM area and 25% at the MUDM area. Overall, this gave a mean productivity for all of Deeside of 2.4 ± 1.8 sd fledged young per pair (n 464).

Plate 8. Fluttering/recently fledged chick, Upper Deeside, North-East Scotland, July 1986. © *Graham Rebecca*

Plate 9. Fluttering/recently fledged chick, Lower Deeside, North-East Scotland, July 1981. © *Logan Steele*

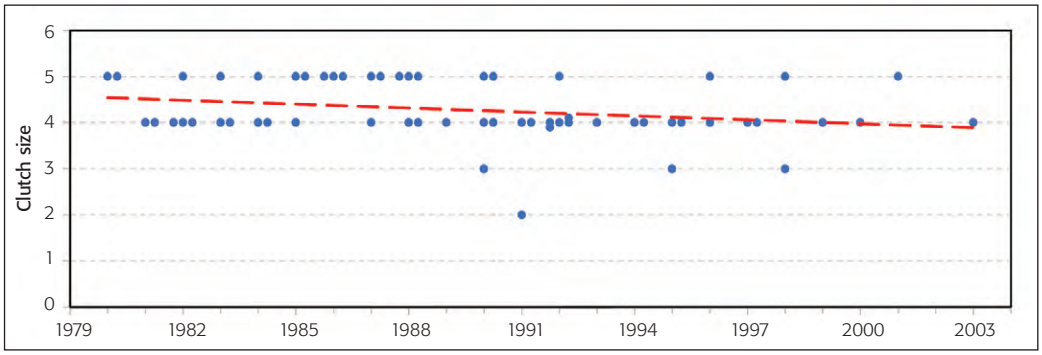

Figure 4. Clutch size of Merlins for 59 nests at the Lower Deeside forestry area, North-East Scotland during 1980–2003. If the data points overlapped, they were moved slightly. The negative trend was significant ($F_{1,57} = 4.0$, $P = 0.05$). The period of afforestation covered 1980–94.

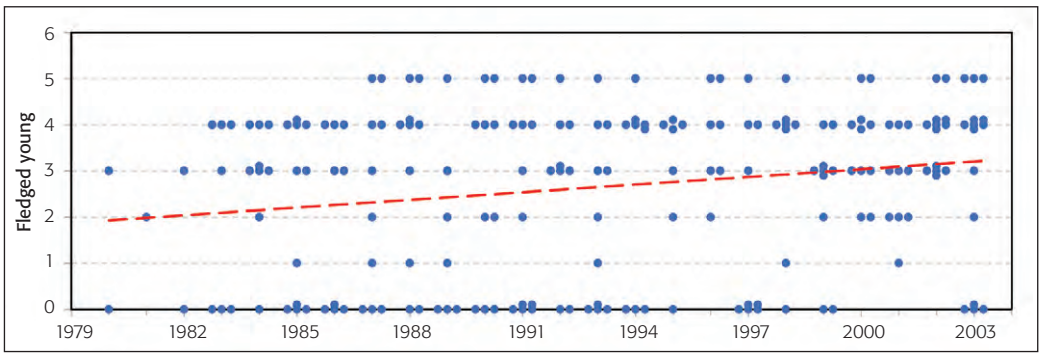

Figure 5. Number of fledged young Merlins for 215 breeding attempts at the Mid and Upper Deeside managed grouse moor area, North-East Scotland during 1980–2003. If the data points overlapped, they were moved slightly. The positive trend was highly significant ($F_{1,148} = 9.04$, $P = 0.003$).

Discussion

Breeding phenology

Between 1971–95 many British birds advanced their breeding cycle in response to warmer springs linked to global climate change (Crick *et al.* 1997). In the analysis by Crick *et al.*, birds showing a significant trend towards earlier egg-laying were not confined to any one ecological or taxonomic group and comprised of waders, resident and migrant insectivores, corvids and

seedeaters. These included species regularly taken as Merlin breeding season prey in North-East Scotland such as Chaffinch *Fringilla coelebs*, Greenfinch *Carduelis spinus*, Starling *Sturnus vulgaris*, Wren *Troglodytes troglodytes* and Willow Warbler *Phylloscopus trochilus* (Rebecca 2020). Merlins are dependent on bird prey, some of which have been influenced by recent climate change. A trend towards earlier egg-laying in the later years of this study may therefore have been expected. However, there was no significant temporal change in Merlin first egg-laying dates from either study area, or between the afforested area and two moorland areas.

The apparent lack of response by Merlins in North-East Scotland to warmer springs could be due to several factors. For example, Merlin are generalist predators with 5–6 birds dominating their breeding season diet (see Rebecca 2020 for a summary of breeding season prey in Britain) and some of their main prey species such as Meadow Pipit *Anthus pratensis*, Wheatear *Oenanthe oenanthe* and Skylark *Alauda arvensis* may not have changed their breeding phenology. Even if Merlin prey were breeding earlier it does not automatically follow that they were available. Other environmental conditions could be just as important as temperature in regulating Merlin breeding phenology. For example, precipitation and/or fog-days can affect Merlin hunting efficiency and males provide for the females for around a month prior to and during egg-laying (Cramp & Simmons 1980). It is plausible to suggest that phenology may have been influenced by female body condition in spring (e.g. Dijykstra *et al.* 1982) linked to the male's hunting efficiency in the pre egg-laying period.

As there was no meaningful difference in first egg-laying dates of first clutches or temporal trends from either area, the data were combined to set a baseline for future comparison and possible comparison with other studies. For example, the first egg-laying date from first clutches for 74 Merlin nests at the Lammermuir Hills in South-east Scotland over 1984–2014 were calculated. Laying date ranged between 20 April and 21 May, peaking in early May with a median date of 3 May (Heavisides *et al.* 2017). Further, for North Yorkshire, England, mean first-egg laying date from 135 clutches covering 1983–2002 was 9 May (range 21 April–6 June) with 85% of clutches started during 1–16 May (Wright 2005).

Plate 10. Merlin brood at ringing stage, Lower Deeside, North-East Scotland, July 1987. © *Graham Rebecca*

Plate 11. Merlin clutch in old crow nest, Lower Deeside, North-East Scotland, May 1986. © *Graham Rebecca*

Recent publications (e.g. Crick *et al.* 1997) have alerted ornithologists to the links between advanced breeding in many birds and the phenomenon of global warming. However, it may need a specific request to Raptor Study Groups etc. for them to consider collecting data on Merlin egg-laying dates from appropriate latitudinal ranges.

Egg size, egg volume and clutch size

There has been considerable debate within avian studies when assessing the advantages or otherwise of larger or smaller than average eggs (reviewed in Williams 1994). Larger eggs can reflect parental quality, particularly of female size and condition (e.g. Bolton 1991 in Williams 1994) or habitat quality (Evans *et al.* 2005). Many studies concluded there was a positive link between larger eggs and chick survival, and hence breeding success (e.g. Amundsen & Stokland 1990 in Williams 1994). In this study, Merlin egg volume was not significantly different between areas, and hence was not having an influence on productivity.

Average clutch size was virtually identical between study areas and there was no significant temporal change at either of the moorland areas. However, this was not the case at the afforested area, where there was a significant decrease in clutch size during the study period. It has been suggested, and confirmed experimentally for the Magpie *Pica pica*, that territory quality is the most important factor in determining the optimum clutch size in territorial birds (Hogstedt 1980). This implies that birds occupying high quality territories lay larger than average clutches and birds with poor territories lay smaller clutches. The temporal decrease in clutch size at the afforested zones combined suggests that the overall area became a poorer habitat for Merlins following afforestation. This is plausible considering that the population there declined to zero in 2004–20 (Rebecca *et al.* 2022).

Productivity

There was a significant difference in productivity between the combined Lower Deeside study areas and the MUDM area, reflecting the highly significant temporal increase in productivity at the MUDM area. Breeding success improved in Britain during 1937–89 (Crick 1993) and by the mid-1990s, Merlins had generally recovered from the worst effects of pollutants (Newton *et al.* 1999). Assuming that the effects of pollutants occurred evenly across Deeside, the lower complete failure rate at the MUDM area, in comparison to both Lower Deeside areas, was the main reason for the better productivity there. This indicates that some aspects of breeding habitat quality at the MUDM study area were better for Merlins than at the Lower Deeside areas. The higher complete failure rate at the LDF area could be a result of the increased predation risk associated with commercial afforestation (e.g. NCC 1986).

In an assessment of productivity and Merlin population status, a minimum of 2.0 fledged young per breeding attempt was the figure reasoned to maintain relative stability (Petty 1995 and see Rebecca 2011). Below that figure, it was predicted that Merlins would decrease, if emigration and immigration for a study area were similar. The poor productivity from the afforested zones, at an average of 1.8 fledged young per breeding attempt, supports the theory from Petty (1995) since the Merlin population there declined significantly in 1982–2003 and was zero in 2004–20 (Rebecca *et al.* 2022).

Overall productivity on Deeside was 2.4 fledged young per breeding attempt, representing a probable stable population at least (e.g. Rebecca *et al.* 1992, Petty 1995). However, this overshadowed the poor productivity at the afforested zones on Lower Deeside which were acting as a 'sink habitat' during the study period. Unfortunately, there is no scope for further comparison at the afforested zones since the area has been abandoned by breeding Merlins since 2004. It would be interesting to compare breeding parameters from the Deeside managed grouse moor areas with areas managed primarily for conservation or native woodland establishment such as at the National Trust for Scotland Mar Lodge estate on upper Deeside (Rao 2004) and at RSPB nature reserves at Abernethy, Speyside; Forsinard, Sutherland and on Orkney (RSPB online) and at recently established 'wildland' estates on Speyside and Sutherland (conservation@wildland.scot). Long-term Merlin monitoring at these estates and nature reserves has probably not been a recent priority, but this could change following the Merlin's recent return to, and continued inclusion in, the Red List of Birds of Conservation Concern in the UK (Eaton *et al.* 2015, Stanbury *et al.* 2021).

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Many estates and their employees co-operated with our access requests and studies, and some gave us information and advice. These, and many individuals from the SOC and local raptor study group, were acknowledged in detail in previous publications (e.g. Rebecca *et al.* 1992, Rebecca & Cosnette 2003). We thank them all again, in particular the late Jim Chapman, the late Neil Cook, Bill Craigie, Paul Doyle, Keith Duncan, Raymond and Judy Duncan, Ed Duthie, Ian Francis, Claire Geddes, the late Jon Hardey, Peter Holden, Glyn Jones, Mike Kimber, Alasdair MacHardey, Ian McLeod, Kevin Peace, Rab Rae, Graeme Ruthven, Ken Shaw, Innes Sim and Fiona Smith for targeted monitoring. The Forestry Commission and Fountain Forestry approved vehicular access which was much appreciated. The RSPB supported the study, and GWR acknowledges their sponsorship, and supervision from Steve Redpath (CEH) during a Ph.D. study of the breeding ecology of Merlins in North-East Scotland, of which this paper formed the basis of a thesis chapter (copy in the Waterston Library). David Elston (BIOS) gave us statistical advice and Ellen Wilson (RSPB) helped produce the maps. We thank Keith Brockie for the excellent life-like sketches in Figure 3. The SOC and Hawk and Owl Trust assisted with travel expenses in the 1980s as did Scottish Natural Heritage in later years. Finally, we thank Ian Francis and Alastair Pout for constructive comments on the draft.

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Ageing and sexing of a Snowy Owl on Ben MacDui in the Cairngorms

P. STRONACH & R. SOLHEIM

The Snowy Owl *Bubo scandiacus* is a scarce but almost annual migrant to Scotland and they have been recorded in the Cairngorms since 1940 (Nethersole-Thompson *et al.* 1974). This article details the ageing and sexing of an individual seen in the Ben MacDui area from the 2 September 2021 in the Moray and North-East Scotland recording areas.

The perceived difficulty of ageing and sexing individuals and the fleeting, sometimes distant, encounters with this species hamper official record collecting and the assessment of the number of individuals involved. In-flight photography using a high shutter speed and large photo sizes offers the opportunity to study wing moult in detail, allowing ageing and sexing to be undertaken (Solheim 2016, 2017).

Plate 12. Snowy Owl in flight above, Ben MacDui, Highland, 4 September 2021. © *Peter Stronach*

Plate 13. Snowy Owl in flight showing open wing, Ben MacDui, Highland, 4 September 2021. © *Peter Stronach*

The difference between adult and juvenile wing feathering

The Snowy Owl is the only owl of the northern hemisphere with distinctive sexual dimorphism in plumage (del Hoyo *et al.* 1999). Since the owl in the Ben MacDui area is a male, we only present the moult of males here. The primaries Snowy Owls are born with very often show mottling between the dark bands towards the tip of the feather and this is common in both males and females (Solheim 2017). There is, however, substantial variation, and some birds may show very little or no mottling at all, resembling much older birds (Plate 14). Mottling in the primary coverts may help reveal the true feather status in such individuals (Plate 15), as coverts seem to be moulted at the same time as the underlying primary feather. The primaries and secondaries of juveniles also usually show an even pattern of spots and bands, with no abrupt changes from one feather to its neighbours. First generation primaries are narrower and more pointed than later generation primaries, but these differences are most easily detected when both generations are still present in the wing together (Plate 16). However, with experience, it should be possible to recognise a single, juvenile primary feather.

Moult sequences

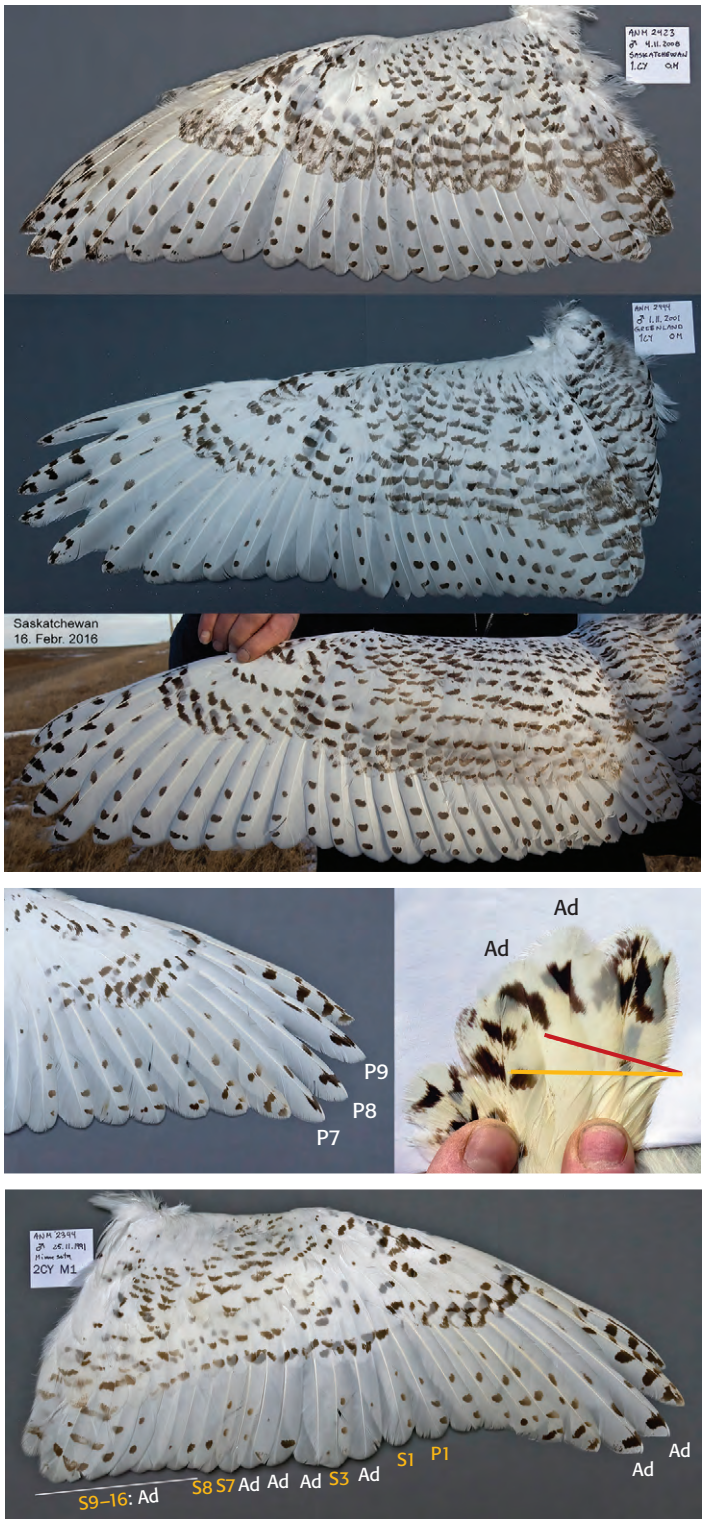
In the subsequent text primaries are numbered innermost (P1) to outermost (P10) and secondaries are numbered from the end of the primaries (S1) to the last feather (S14 or S16) next to the tertials. Snowy Owls can have between 14 and 16 secondaries. The text is based on Solheim (2012, 2017). Moult timing usually occurs in summer, between June and August. The first four moults are summarised and simplified below:

- First moult in second calendar year (2cy) - the first moult usually involves 1–3 primaries (P7–P9) and the innermost 4–6 secondaries (S10–S15). However, sometimes no primaries are moulted during the first moult.
- Second moult in third calendar year (3cy) - a bird which has moulted P7 in moult may moult P8 and P9. P6 and/or P10 may be moulted at this stage but P1–P5 are usually still the juvenile feathers.
- Third moult in fourth calendar year (4cy) - during this moult the innermost primaries start to moult P1–P5 (P6). Also the outermost primary P10 is moulted now if it has not been shed during the second moult. P7 may be moulted for the second time. The innermost secondaries and tertials are moulted for the second time, giving an abrupt border towards some older secondaries from the first moult, and then medium fresh feathers from the second moult further out. The second moult of innermost secondaries usually involves fewer feathers than what is found during the first moult.
- Fourth moult at 5cy - at this stage no juvenile feathers are left. P7 is usually moulted again at this stage if it has not already been moulted during the third moult.

Plate 14 (top). Wings from three juvenile male Snowy Owls, showing variation in mottling on tips of primaries and on coverts. © *Roar Solheim*

Plate 15 (middle). Difference between juvenile (yellow line) and adult (red line) primary coverts, and hand of a male Snowy Owl where primaries P7–P9 and corresponding coverts have been moulted, while all other primaries and coverts are juvenile. © *Roar Solheim*

Plate 16 (bottom). Wing of 2cy male Snowy Owl after first moult of flight feathers. Yellow denotes numbering of feathers. All adult feathers are noted Ad (white). Note difference between adult primaries P7–8 and adjacent primaries, with fewer dark bands and longer distance from outermost bar to tip of feather. Note also that dark bands 2 and 3 only cover the outer vane on these feathers, in contrast to primary P9 label where they cross more than half the width of the inner vane. This male had an extended first moult, where not only the innermost secondaries S9–16 were moulted, but also secondaries S4–6 and S2 were changed. S2 and S5 are focal moult points where secondaries may be moulted during first moult, and definitively during the second moult. © *Roar Solheim*



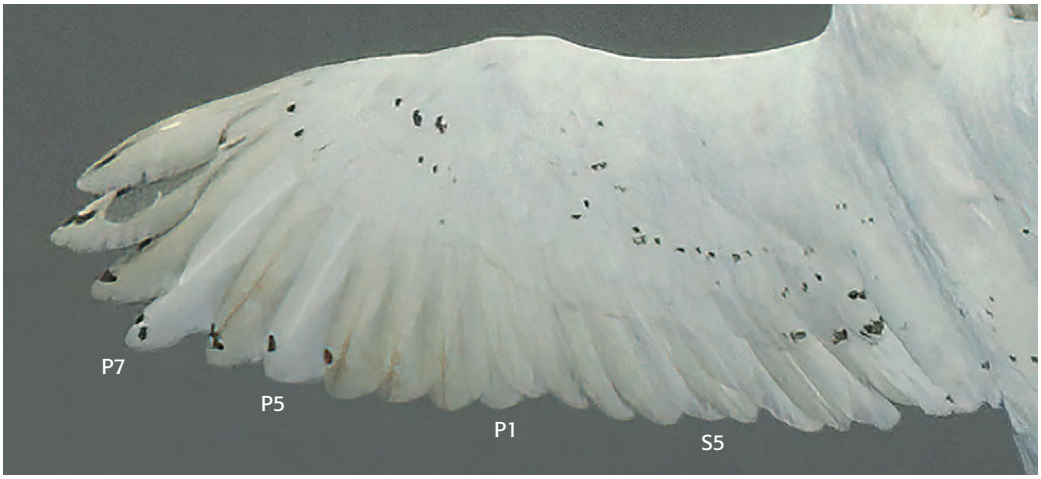


Plate 17. Moult interpretation of the Ben MacDui Snowy Owl wing, showing the moult contrast between new feathers moulted in the summer of 2021 (P5 and P7) and older wing feathering, Highland, 4 September 2021. © *Peter Stronach*

Analysis of the Ben MacDui individual

The Ben MacDui individual has no juvenile feathering in the primaries and secondaries, with no mottling present in the primary and secondary coverts or on the primaries themselves. Both P7 and P5 are freshly moulted on both wings, showing as bright white feathers compared to the dirty, creamier old feathering. Both the new P5 and the older P4 are similar in respect to width and roundness; juvenile primaries would stand out as narrower and more pointed. Primaries P1–P3 are without any dark bars or even tracks of faded bars, which also shows that these are adult feathers. This owl has therefore moulted at least four times, since the innermost primaries are moulted for the first time during the third or fourth moult at age 4cy/5cy. It is therefore aged as 5cy+. There are still some dark spots on the inner secondary coverts and on scapulars. These spots are usually lacking in older males, which usually turn almost completely white, only retaining some dark spots on tips of the outer primaries. This male is thus judged to be in the age group 4–6 (7) years.

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A Grey Wagtail winter roost in Dingwall, Highland

A. GODDARD

As dusk was approaching along the River Peffery in Dingwall on 3 November 2020, singing and high-pitched twittering drew my attention to a small reed bed across the river and immediately downstream of Peter's Bridge. A number of Grey Wagtails *Motacilla cinerea* were gathering, jostling for position, calling and posturing to one another in and around the reeds. I vaguely recalled them roosting in the same reed bed in previous years, but it was only after consulting with the Highland bird recorder that I realised this roost's significance as the first recorded Grey Wagtail winter roost in the Highlands and so I agreed to monitor it over the winter. I checked the roost on eight occasions between 4 November and 11 April.

Numbers

On 4 November I undertook the first roost count and observation. The weather was dry, calm and 7ºC. By 16:20 hrs six Grey Wagtails had arrived and by 16:30 hrs there were 11 birds. By 16:50 hrs it was largely dark and the birds were quietening down. I estimated there to have been around 15 birds though is difficult to say for certain as they constantly flit around and it became too dark to be able to see accurately. See Table 1 opposite for the total number of birds counted at each observation.

On 17 November it was dry and 12ºC. At 15:45 hrs two Grey Wagtails arrived. These were soon joined by a single Pied Wagtail *Motacilla alba yarrellii* but it flew off within ten minutes, so did not stay to roost with them. By 16:10 hrs another two single Greys had joined the roost and as the sun set there were approximately 17 birds.

Plate 18. Grey Wagtail reed bed roost, Dingwall, Highland, 3 November 2020. © *Andrea Goddard*

On 12 December it was drizzling and cold at 5ºC. By 15:40 hrs three Pied Wagtails arrived separately. At 15:45 hrs the first of the Greys arrived and within half an hour approximately 19 Greys had flown in.

From 26 December the north of Scotland had been persistently well below freezing with occasional snow showers and almost constant ground frost. 12 January was an exception at 0.5ºC and dry. At 16:10 hrs a single Pied Wagtail arrived and at 16:20 hrs the first of the Greys flew down to the water's edge. By 16:40 hrs approximately 15 Grey Wagtails had arrived and settled down alongside three Pied.

In early February northern Scotland experienced two weeks of very heavy snow showers and plummeting overnight temperatures in excess of -12ºC, and so by 17 February at 4ºC it was relatively mild. On this evening I counted approximately 15 Grey and six Pied Wagtails.

By 17 March it was 8ºC and drizzling. I expected to observe a reduction in numbers due to the lengthening days but instead counted 17 Greys.

On 19 March the first reports of Grey Wagtails arriving at their inland breeding territories were being received and so on 21 March (6ºC and dry) I observed a reduction in Grey Wagtail numbers at the roost, counting only seven individuals with both male and female birds.

My last observation was on 11 April. As expected, no wagtails were recorded even though it was still very cold with a predicted overnight temperature of -4ºC.

Table 1 below indicates that numbers remained fairly stable throughout the winter regardless of changes in the weather or temperature (particularly cold/snowy spells). Grey Wagtails are particularly vulnerable to mortality during prolonged severe cold weather (Moss 1995). However, February's cold snap did not appear to result in any reduction in numbers and so perhaps this coastal and relatively urban location provides them with shelter and relative warmth and is the reason why they chose to roost here. As expected, numbers began to decline from mid-March as the days lengthened and as the birds dispersed to their breeding territories across the Highlands.

Table 1. Numbers of wagtails at the Dingwall roost site in winter 2020–2021.

Date	Temperature ºC	Weather	Grey Wagtail	Pied Wagtail
04/11/20	7.0	Dry, calm	15	0
17/11/20	12.0	Dry, calm	17	1
12/12/20	5.0	Drizzle	19	3
12/01/21	0.5	Dry, calm	15	3
17/02/21	4.0	Dry, calm	15	6
07/03/21	8.0	Drizzle	17	0
21/03/21	6.0	Dry, calm	7	0
11/04/21	-4.0	Dry, calm	0	0

Roosting behaviour

Grey Wagtails typically arrived at the roost either singly or in pairs and from different directions and heights, some dropped in suddenly from above and others approached low to the water following the river's course. Most announced their arrival with loud chirrups and vigorous tail wagging upon landing at the water's edge. Occasionally, when a Grey Wagtail descended towards the roost area another already settled individual would flash its tail sideways at it just before the other landed. It was a very subtle, swift gesture but I observed it several times whilst monitoring this roost. I have not read of this behaviour before and can only presume it to be a territorial signal, aggressive stance or simply indicating recognition. All early arriving birds initially sat at

the base of the reeds at the edge of the river, preening, singing and chasing one another from stem to stem in a sociable way. As the sky darkened the birds one by one flew up and over into the main body of the reed bed to roost close together, all the while calling, flitting around and vying for position. Latecomers to the roost dropped straight into the reeds without first sitting at the water's edge. The birds eventually quietened down and became still, finally roosting with their heads tucked into their body feathers in an upright position half way up the length of their chosen vertical reed stem. Pied Wagtails are known to associate with Greys at roost and were observed at this roost, though they typically arrived earlier and sat slightly apart from the Greys.

In poor weather I observed noticeably less singing and their overall behaviour became subdued, presumably to conserve energy. As spring approached and the days lengthened the male Greys' black bibs became more apparent, both sexes gradually appeared much more brightly coloured and also began to sing with increasing vigour.

Discussion

In winter, Grey Wagtails move away from their breeding territories towards lowland coastal regions and many also migrate south (Marchant *et al.* 2002). Numbers decline to a few overwintering individuals in the Highlands and as such communal winter roosts here have never before been recorded. As a riverside bird, they depend upon invertebrates and small fish for survival (Witherby *et al.* 1943). They have also become associated with many man-made sites, in particular water treatment plants where insects are available year-round (Gough *et al.* 2003). They are known to roost in reeds or trees near to rivers, singularly, in pairs or communally, and occasionally joining Pied Wagtail roosts in urban environments where they benefit from warmer temperatures (Seago n.d. and Marzluff *et al.* 1998).

This new communal winter roost is the first recorded in the Highland region, and with no known records for Caithness is the most northerly recorded in mainland UK. It is important to continue to monitor and recognise this site as it may reflect a changing range and distribution of the species in response to climate change. In future years, to more accurately count the number of birds once settled within the reeds thermal imaging equipment would be beneficial.

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Lesser Whitethroat holding territory in mixed woodland

On 29 May 2017 Liz Parsons alerted me to a singing Lesser Whitethroat *Sylvia curruca* in woodland by Saltcoats, Ayrshire. It was singing quite vociferously (at 28 full song phrases per five minutes) and seemed fairly settled. I was perplexed by the choice of habitat here, as Lesser Whitethroats in Scotland normally hold territory in various form of scrub (Forrester *et al.* 2007, Byars 2021) This male, however, was holding a small territory (estimated at 0.2 ha) in mixed woodland, consisting mostly of Alder *Alnus glutinosa*, with smaller amounts of Rowan *Sorbus aucuparia,* Sycamore *Acer pseudoplatanus,* Scots Pine *Pinus sylvestris* and a dense bramble *Rubus* agg. understorey. The male was never observed venturing into adjacent thorn scrub only 30 m away, preferring to remain within the tree canopy. The bird was still present the following day, singing and actively feeding within the dense upper canopy of tightly packed Alder and Sycamore trees around 8–10 m. The Lesser Whitethroat resembled a *Phylloscopus* warbler in behaviour when feeding high in the dense foliage. By 31 May the bird had obviously moved on and was not relocated again, despite searching the site throughout June, in case the bird had successfully paired and bred. In 38 years field work on this species, I have never seen Lesser Whitethroats hold territory in Scottish mixed woodland before although Lesser Whitethroats do breed in oak woodland in England (Cramp & Simmons 1992). In Ayrshire, Lesser Whitethroats tend to arrive on territory between late Apil and the first week in May (pers. obs.). With such a late arrival date and considering the atypical habitat type, I concluded that this male was possibly an off-course Scandinavian migrant. In Finland, Lesser Whitethroats are known to breed in habitats consisting of low scrub mixed with taller trees such as alders, pines and birch *Betula* spp. (Haila & Hanski 1987).

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An estimate of the breeding Goshawk population in Fife

Smout (1986) described the Goshawk *Accipiter gentilis* as a rare visitor to Fife. She quoted no records from the 1960s but thereafter she mentioned one near Cupar August/September 1975, a male shot at St Andrews in December 1977 and a female at Balcomie 4 October 1981. 1982 was a good year with singles at Morton Lochs on 1 May, Falkland on 25 August and Gateside on 1 November. There were two in 1983: a male at Fife Ness on 1 May and a female at Cameron Reservoir on 30 October. In 1984 there was one at Loch Ore Meadows on 15 January and two at unknown sites in August. If we go further back there are very few records. Harvie-Brown (1906) mentioned only two: one killed at Kemback in 1842 and an adult female obtained at Elie 1877. It is interesting to note that the old records come from the same areas

where we watch Goshawks today. Adult Goshawks are sedentary in the UK and juveniles disperse from their natal area in late summer (Petty 2002). True long-distance migrants are rare; there are only eight Fair Isle records, and the two Isle of May records probably involve local movements rather than long distance migrants.

Breeding was first proven in Fife in 1998 (Elkins *et al*. 2003) and by 2003 the population was estimated at between two and six pairs (Elkins *et al*. 2003). By the time of the second Fife Atlas (Elkins *et al*. 2016) which involved fieldwork from 2007–13 this estimate had increased to 6–12 pairs. In the winter of 2015/16 the Fife Goshawk group was set up with the aim of estimating the Fife breeding population. A list of potential sites was put together from existing records and local knowledge. Over the next six years these sites were visited and monitored using vantage point methodology outlined in Shaw *et al*. (2021). Additional information was gathered throughout the breeding season. In 2016 four Goshawks territories were identified. In 2017 there was a minimum of eight territories, in 2018 it was12 territories. In 2019 there were 13 territories. It was the same in 2020, however five territories were in different places to 2019.

During the winter of 2020/21 the Fife Goshawk Group categorised Goshawk sites in more detail: 'territory' was defined as a site where territorial behaviour had been noted, display and/or a pair of birds. A 'site' was considered a lower category where a Goshawk had been sighted during the breeding season. In 2021, 32 observers carried out vantage point work (Shaw *et al*. 2021) throughout Fife in the Goshawk breeding season from mid-February to August but particularly from the last week in February until mid-April; 23 territories were recorded and birds were seen at a further eight sites.

Between 2016 and 2021 territorial behaviour (display or pair present) was recorded at 29 sites and at more than 35 sites since 2000. However, it must be noted that the birds can move up to 2.5 km to another nest site (Petty & Anderson 1996) and (Hardey *et al*. 2013) states that display does not necessarily result in a nest being built. A conservative estimate of the number of breeding pairs of Goshawks in Fife is 25–30 pairs. The Goshawk is not evenly distributed in Fife; the density is highest in the big forests in the west and, perhaps surprisingly, in the East Neuk. The north was the least well studied area and the centre of the county appeared to have the lowest density. However, the centre of Fife is difficult to watch due to the lack of higher ground and potential vantage points.

Goshawks defend only their nesting territory and hunt within large overlapping home ranges. Nesting ranges are less than 5 ha (Petty 1996). Our observations have concluded that they are probably at maximum or near maximum density in the large forests in the west of the county where different pairs can be seen displaying from the same vantage point and up to five birds have been seen in the air at one time during the 'display season' (G. Sparshott pers. comm.). Further increase is likely to come in the north and the East Neuk where food is plentiful and pairs have already started nesting in large shelter belts. It is very likely that Goshawks will do well on the 'low ground' where food is plentiful (M. Marquiss pers.comm.)

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Recently fledged Hen Harriers cooling down in burn

As part of co-ordinated monitoring of Schedule 1 raptors in North-East Scotland, we visited a Hen Harrier *Circus cyaneus* moorland breeding site on upper Deeside, Aberdeenshire at around 11:30 hrs on 20 July 2021 to record the outcome. We had ringed four nestlings (three male, one female, plate 19) on 29 June[1] and confirmed the breeding attempt was still active on 8 July during a three-hour vantage point (VP) watch, when GWR saw two food deliveries to the nest-area by the female harrier, and at least one nestling flapping around near the nest, which was situated in Ling Heather *Calluna vulgaris* of 55 cm depth.

On 20 July we selected an appropriate VP site that both overlooked the nest-area and gave good views over the surrounding terrain into which we considered the young would fledge. After about five minutes we saw the male harrier at some distance, spiralling up then drifting away. Although our VP site was good, there were areas of dead ground and a scattering of mature Scots Pines *Pinus sylvestris* that obscured our view; we probably missed a food delivery by the male harrier, or it happened before we were settled. Whatever the case, we quickly saw a fledged harrier in the vicinity where the male had been, that flew towards us

[1] Nest visiting and ringing was covered by a BTO Schedule 1 licence to GWR.

then dropped into a small burn near the nest-area, around 250 m from our VP site. A second fledged harrier was also in the water, and after a few minutes we were aware of a third fledged harrier in the burn. One of the harriers then fluttered onto a large rock in the burn. Shortly after, the fourth sibling flew in and landed near the burn. All four were within a few metres; two still in the water, one on the rock and one on the grass at the water's edge. The fourth juvenile eventually jumped into the water and a second bird fluttered onto the rock. The birds appeared to be cooling down in the shallow water, just standing or moving around slightly but not splashing about as in conventional bird-bathing behaviour. All four juveniles were well grown and nearing independence (estimated ages around six weeks, plate 19) and after about 30 minutes we left. At that time, two juveniles were still on the rock and two in the water.

Plate 19. The female Hen Harrier nestling on 29 June 2021 after ringing. Estimated age around three weeks. © *Ian Hill*

The weather had been particularly warm during the previous few days and the temperature on the 20th was 24ºC back at the car-park; another hot, calm day. GWR has observed Hen Harriers at the fledging stage many times but had not witnessed similar behaviour. Presumably, the birds were struggling with the heat and trying to regulate their body temperatures. Birds usually thermo-regulate by panting (losing heat through the respiratory system) or exposing bare areas of skin, and many species actively bathe during hot weather. Further, to encourage heat loss, gulls stand in water, and storks and vultures defecate over their own legs (e.g. Ehrlich *et al.* 1988, Lederer 1998). With the distance and haze, we were unable to tell if any of the juvenile harriers were panting, but they all appeared to have purposely entered the water. Our observations were unexpected, but interesting and possibly unusual since this behaviour is not described in two Hen Harrier monographs (Watson 1977, Scott 2010) or for harriers generally (Simmons 2000). We would be interested to learn of any similar observations.

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A bill abnormality in an Oystercatcher in the Moray Firth

Bill abnormalities have been widely recorded amongst the birds, particularly amongst Passerines (Pomeroy 1962, Craves 1994). Bill abnormalities include crossed mandibles, a decurved upper mandible, an upcurved lower mandible, elongation of both mandibles, lateral curvature, and a gap between the lower and upper mandibles (Pomeroy 1962, BTO 2017). Deformities can be a result of nutritional deficiency, exposure to environmental contaminants, disease, parasites, trauma, genetic disorder and accident (BTO 2017, Handel *et al.* 2010). Deformed beaks in Oystercatchers *Haematopus ostralegus* are not common but have been recorded in the past. Pomeroy (1962) found six examples of deformed bills (elongated, crossed and curved) and Cooney (2017) reported an Oystercatcher with an extraordinary long bill. Briggs (1984) recorded 12 Oystercatchers with damaged bills, which represented only 0.2% of the total number caught at Morecambe Bay, Lancashire, between 1968 and 1980. Of those, 10 had a crossed bill tip and two had a broken lower mandible.

On 17 October 2015, an Oystercatcher with a deformed beak (Plate 20) was caught by the Highland Ringing Group at Alness Point, Moray Firth, Ross-shire, in a flock of 225 birds. Its beak was crossed at the tip. The same bird had been ringed as a first-year bird, fifteen years earlier, on 30 September 2000, at Culbin 35 km away. In 2000, the bill had no abnormality, and its length was 69.1 mm in comparison to 91.3 mm in 2015 (Table 1). The mass and wing length of the young bird in 2000 fell well within the range of the measurement of other young birds caught on that day (Table 1). Similarly, in 2015 the mass and wing length was within the range of the other adult birds caught on that day, except the bill, which was the longest (Table 1).

Plate 20. An Oystercatcher with a crossed bill tip caught at Alness Point, Highland, October 2015. © *Bozena Kalejta-Summers*

Specialization in diet in relation to various feeding technique of Oystercatchers is well documented (Hulscher & Ens 1991, Durell *et al.* 1993, Johnstone & Norris 2000, van de Pol *et al.* 2009). There are three main feeding techniques used by Oystercatchers which are reflected in differently shaped bills (Swennen *et al.* 1983). Birds that feed on polychaetas and deep-buried bivalves have a pointed bill which allows them to prob into soft substrates (Plate 21). Oystercatchers that feed on large, surface-living, or shallow-buried bivalves, such as Blue Mussels *Mytilus edulis* and Cockles *Cerastoderma edule,* have a chisel-shaped bill with a blunt but thin tip. They use a stabbing technique and

Table 1. The mean and range of the mass, and wing and bill lengths (mm) of 22 first-year Oystercatchers caught at Culbin in 2000 and 127 adults caught at Alness Bay in 2015. Bird X is the Oystercatcher with the abnormal bill.

	First-year birds caught in 2000			Adult birds caught in 2015		
	Mass (g)	Wing Length (mm)	Bill Length (mm)	Mass (g)	Wing Length (mm)	Bill Length (mm)
n	20	21	21	126	38	125
Mean	519.1	255.7	70	564.5	263.3	75.4
Range	440–605	241–268	64.7–80.1	456–699	248–276	64.6–90.0
Bird X	525.0	246.0	69.1	539.0	265.0	91.3

target the gap between the shells to cut the adductor muscle that keeps the shells closed. The same prey are also targeted by Oystercatchers with a blunt but thick tip of the bill (Plate 22), but they open the shell by hammering a hole in the closed bivalve. The stabbing and hammering cause the most abrasion to the bill. At Morecambe Bay, 83% of the Oystercatchers with damaged bills were mussel feeders, suggesting that either hammering or stabbing was used to open the shells (Briggs 1984). Rutten *et al.* (2006) showed that the probability of Oystercatcher's bill tip being damaged is higher when feeding on large bivalves. However, whereas stabbing affects mostly the lateral sides of the tip, hammering damages the front edge of the tip of the bill (Hulscher 1985).

Hulscher (1985), Hulscher & Ens (1991), Durell *et al.* (1993) and Ens *et al.* (1996) demonstrated that birds can switch to other prey if feeding conditions become unfavorable, due either to prey availability or competition, and they can develop bills with intermediate attributes to compensate for such change. According to Hulscher & Ens (1991), an Oystercatcher's bill grows at an astonishing rate of 0.4mm per day, and so birds can change their bill types within just 2–3 weeks. It is, therefore, plausible that if a bird uses the bill before it is fully adapted to a new feeding habit, damage to the bill is possible. If the mandibles are no longer symmetrical, they can grow independently of each other, forming a slightly crossed bill, and lead to the abnormality observed at the Moray Firth. Oystercatchers that forage on the shores of the Moray Firth feed mainly on mussels, but they also probe into soft substrates, including coastal grassy fields, in search for worms (Plate 21). The latter technique is unlikely to cause the bill damage reported here.

An abnormal bill can impact a bird's survival by affecting its feeding technique and choice of food and impair its ability to preen (Rutten *et al.* 2006). The latter can lead to excessive parasite infestation which, in turn, will affect its health (Hodges *et al.* 2019). Indeed, at Morecambe Bay, the mean body mass of 12 Oystercatchers with damaged bills was signifi-

Plate 21. An Oystercatcher uses its pointed bill to extract a worm from a grassy coastal field, Highland, March 2017 © *Bozena Kalejta-Summers*

Plate 22. An example of a blunt tip of the bill used to tackle hard-shelled bivalves, Highland, October 2015. © *Bozena Kalejta-Summers*

cantly lower than the mean weight of the birds with undamaged bill (Briggs 1984). Birds, however, can compensate for their deformity by switching prey or feeding technique (Pomeroy 1962, Hulscher 1985, van Hemert *et al.* 2012). It is not known what prey was being tackled by the Oystercatcher with a crossed bill in the Moray Firth or the technique it used. However, the body mass of the bird was in the range with the rest of adults in the flock, indicating that the bird was able to forage effectively.

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Some apparent cases of egg-dumping by Shags breeding in Caithness

Evidence that Shags *Gulosus aristotelis* will sometimes lay their eggs in the nests of other birds, either conspecifics or other species, is very limited, the only records we have been able to find being those noted by Craik (2010) of a Shag laying an egg in the nest of a Herring Gull *Larus argentatus*, by Snow (1960) of two instances from Lundy, Devon, of clutches of six eggs apparently laid by two different females, and a number of unpublished records of abnormally large clutches from the Isle of May, Fife, and the islands of the Firth of Forth (F. Daunt, pers. comm.). In view of this it seems worth putting the following observations on record. During our annual ringing visit to the large Shag colony among boulders at Badbea, Caithness in June 2021 we were surprised to discover three nests containing respectively six, nine and nine eggs. All three were located relatively close to the north-western perimeter of the colony. The two 9-egg clutches were in nests 3 m apart, one in the open, the other in a recess between boulders; the 6-egg clutch was about 20 m away from these two in an open situation. The eggs in all three nests appeared more or less pristine, with little evidence of the staining that occurs after an adult has been sitting on the eggs for some days, and we conclude that they had been subject to very little, if any, incubation. A dead Shag chick approximately three weeks old was found about 150 m away on the slope above the colony; it had almost certainly been dropped there by a ground predator, probably a Fox *Vulpes vulpes*. It was also noticeable that a strip roughly 5–10 m wide along the north-western edge of the colony which had certainly been occupied in 2019 (no observations were made in 2020) was deserted in 2021. This is the easiest part of the colony to access; the remainder is by no means so straightforward, its large boulders typically 3–5 m across are challenging for humans and would probably be extremely difficult if not impossible for Foxes. Ground predators (again Foxes are implicated) have had a devastating effect on several nearby colonies in the past few years, most notably the Shag, Herring Gull and Great Black-backed Gull *L. marinus* colonies on the cliff immediately to the south-west of the Badbea Shags. It seems that the latter colony had come under pressure from a ground predator in 2021 and we speculate that the stresses on the birds along the northern periphery of the colony may provide at least a partial explanation of the egg-dumping behaviour. However, the precise circumstances which led to these abnormally large clutches are unclear. Adult Shags are usually very protective of their nests and it is difficult for females to get access to a nest which is not their own to lay an egg. One possibility, and this applies particularly to the 6-egg clutch, is that it was the result of two females sharing a nest and which is not strictly egg-dumping. More likely, we suspect, given the apparent levels of disturbance, is that these abnormally large clutches were the result of a number of females, having been disturbed from their nests at night and, reluctant to return to them, dumping their eggs in abandoned or unattended nests. Unfortunately we were not able to make a later visit to the colony to determine the outcome of these nests.

Acknowledgements

We thank Dr Francis Daunt for his advice on egg-dumping in the Shag and comments on an earlier draft of this note, and Mr A. MacAuslan and Welbeck Estates for permission to ring at Badbea.

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Snow, B. 1960. The breeding biology of the Shag *Phalacrocorax aristotelis* on the island of Lundy, Bristol Channel. *Ibis* 102: 554–575.

Robin M. Sellers, Crag House, Ellerslie Park, Gosforth, Cumbria CA20 1BL.
Email: robin.m.sellers.gosforth@gmail.com

Mark Oksien, 32 Struan Drive, Inverkeithing, Fife KY11 1AR.

Revised ms accepted November 2021

Plate 23. Conference audience.

SOC Virtual Annual Conference, 19–21 November 2021

Once again, owing to the COVID-19 pandemic, the annual conference was run as a virtual event, hosted on Zoom. A programme of talks was organised around a similar timetable to the usual face-to-face event, starting on Friday evening with a talk and a quiz, and continuing on Saturday and Sunday afternoon. We had 180 registrations, which translated to over 200 attendees when taking into account couples and families.

SOC President, Ian Bainbridge, opened with a warm welcome before handing over to SOC Vice-President *Birding & Science*, Prof Jeremy Wilson, to introduce the evening's speaker - fellow RSPB colleague, Tom Finch.

Conservation on a crowded planet: can we have our cake and eat it?

Dr Tom Finch - Conservation Scientist, RSPB Centre for Conservation Science

Tom explained how land is being placed under increasing pressure, but we're not making any more of it. So how can we balance the often-competing needs of people and nature, and is there enough space to have it all? Globally, agriculture is one of the dominant threats to wild species, both through expansion (by which new farmland replaces natural vegetation) and intensification (by which agricultural outputs per unit area increase). For any given level of

required food production, efforts to tackle agricultural expansion are effectively in competition with efforts to tackle intensification. The land sharing/sparing framework provides a thought experiment to help us understand this conundrum. In contrast to results from elsewhere in the world where the majority of studied species would benefit from a land-sparing approach – which limits or reverses agricultural expansion – for birds in the UK, this majority is less clear-cut. Instead, a mixed approach, which tackles both expansion (by promoting some spared, unfarmed habitats) and intensification (by promoting some low-yield high-nature farmland) balances the needs of species with contrasting ecological requirements. Some areas of high-yielding – but, critically, sustainable in the long run – farmland frees as much land as possible to be used mainly for conservation.

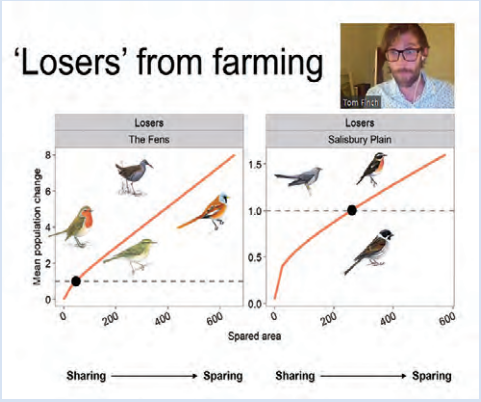

Plate 24. Tom Finch.

A lively Q&A session with Tom was followed by a quick break as attendees grabbed a drink and settled down for the quiz. Three separate rounds were hosted by their respective compilers: BTO's Ben Darvill, and son, Luc; and past SOC Presidents, David Jardine and Ian Thomson. Round one was a bit of light hearted fun as participants were tasked with identifying the bird species drawn by young Luc's often impressionist drawings. There then followed two rounds of general bird knowledge, courtesy of David and Ian, who maintained their reputation for setting fiendish questions, including the odd trick one! The winning team were Jeremy Wilson, Sean and Ali Morris, and Alan, Brian and Jenny Phillips.

Doors opened at 2.30pm on Saturday, with participants enjoying some social chat as they arrived. Ian Bainbridge welcomed the audience and handed over to Jeremy once again to chair the first session.

Delivering conservation through birding and science

Mark Lewis - Birding and Science Officer, SOC

Mark described the work he will be progressing alongside the SOC's Birding and Science Committee, and a key theme through these various work-streams is ensuring that our endeavours as birders have conservation value. What we do in our day-to-day lives as birders can often seem far removed from cutting-edge science and conservation. However, there can be a very strong link between all of these things. There are many examples of where data collected by birders as part of established surveys, or collated through BirdTrack or by a Local Bird Recorder, have influenced the implementation of direct conservation action. This talk looked at examples of where scientists have taken birder-generated data and produced positive outcomes for declining species. Mark also showed how species' responses to conservation measures are highlighted by birder-generated data, allowing the efficacy of implemented schemes to be assessed. The talk demonstrated how essential the data birders gather have been to monitoring trends in the UK's birds, and stressed how important today's data will be for tomorrow's conservationists.

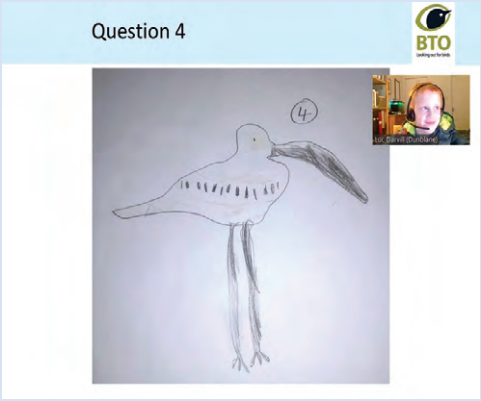

Plate 25. Quiz co-host, Luc Darvill.

Corn Bunting Recovery Project

Yvonne Stephan - Conservation Advisor, East Scotland, RSPB Scotland

Yvonne recalled that until very recently, the Corn Bunting was one of the fastest declining birds in Scotland. The combination of a late breeding season, a preference for nesting in growing crops, and an insect and seed (centred on grains) diet, is likely to have made populations especially vulnerable to modern agricultural practices. The talk highlighted the challenges the species faces, what it needs to thrive, and how farmers and landowners have turned the tide in some of the Corn Bunting's strongholds. In areas where farmers and landowners are making a collective effort to help the species recover and where, as a result, a large proportion of Corn Buntings have access to the 'big three' – winter seed food, summer insect food, and safe nesting habitat – numbers have increased considerably. In Fife, the number of territories has risen to around 300, up from just 75 in 2001 when the population there was at its lowest point. This fantastic success demonstrates what can be achieved wherever people join forces. The talk also highlighted how remaining issues around nest destruction through silage harvest are being tackled through two trials: one focusses on improving the quality of silage harvested after its prime to protect chicks and nests; the other investigates alternative nesting habitats, in an attempt to lure Corn Buntings away from silage fields.

Plate 26. Yvonne Stephan.

'Alamotties' on North Ronaldsay

Lauren Evans - Undergraduate, Biological Sciences (Ecology), University of Edinburgh

Lauren briefly introduced some of the conservation projects she was involved in whilst volunteering at North Ronaldsay Bird Observatory (NRBO), including monitoring the breeding success of Arctic Terns, colour-ringing Curlew chicks and mapping breeding pairs of skuas, Eider and Ringed Plover. Taking part in these projects helped to inspire her dissertation research into the effect of climatic variability on the body mass of (European) Storm Petrels. Average sea temperature is rising due to climate change, with knock-on effects on Sardine abundance (Storm Petrels' primary food source). Previous research has demonstrated Storm Petrels use a strategic regulation of body reserves when in 'good' years (high food availability), Storm Petrels are significantly lighter than in poorer years when they carry greater body reserves to buffer against starvation. Therefore, using 26 years' worth of ringing records from NRBO, Lauren aims to investigate whether there has been a significant change in Storm Petrel body mass on their northern breeding grounds. Rather worryingly, the conservation implications for Storm Petrels are difficult to study and remain largely unknown. Lauren ended her presentation by thanking the SOC for giving her the opportunity to present on these early stages of her research.

How does anthropogenic noise affect the structure of bird calls and songs?

Mark Pitt - BSc Ecology graduate, University of Edinburgh

Although only 1% of the earth's surface is covered by towns, cities and roads, the ecological impacts of these urban areas are far-reaching. From increased light pollution, chemical pollution, and mortality risk due to traffic collisions, urban areas create novel environmental pressures that may alter species interactions and population dynamics. One of the most pervasive effects of urbanisation is low-frequency noise pollution from traffic and industrial infrastructure, which could potentially interfere with acoustic signals used in animal communication. This talk discussed how anthro-

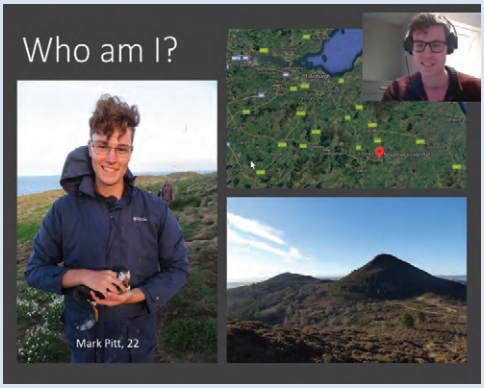

Plate 27. Mark Pitt.

pogenic noise affects the minimum frequency (Hz), peak frequency (Hz), maximum frequency (Hz), duration (s), and bandwidth (Hz) of avian acoustic signals by briefly summarising Mark's results from a phylogenetically controlled meta-analysis.

Mark found that anthropogenic noise did not affect the investigated signal components, with most species responding similarly to anthropogenic noise. Given how widespread sources of low-frequency noise are in natural environments, species living in urban areas may already be adapted to vocalise at high frequencies to avoid acoustic interference. Alternatively, birds may experience physiological and fitness constraints that prevent them from adjusting their signal components. Although Mark found no change in the signal components with exposure to anthropogenic noise, he proposed that noise pollution could still mask acoustic signals or filter avian communities so only species with high-frequency signals establish populations. Thus, there is a need to preserve the natural soundscapes to which species are adapted.

Saving a species from extinction in the UK - the Black-tailed Godwit

Dr Jennifer Smart - Head of Conservation Science Scotland & Northern Ireland, RSPB

It is clear from national monitoring schemes like the Breeding Birds Survey (BBS) that breeding waders are in trouble, and the scientific literature points to predation as a factor currently limiting their populations. Detailed research over many years on lowland wet grasslands tells us that Foxes are the most important predator of wader nests, and combined with raptors, reduce the survival of wader chicks. Testing of a range of solutions designed to reduce predation impacts tells us that improving the quality of habitats for waders and reducing their suitability for predators is really important. However, more intensive predator management methods like exclusion fencing, lethal control, diversionary feeding, and head-starting can be effective, but their efficacy is highly dependent on local situations and knowing which predator is creating the problem. These issues are nicely illustrated by the Black-tailed Godwits breeding in England, where predation is the primary cause of their poor conservation status. Despite a vast knowledge of the predator problem and deploying many of the tools in the conservation toolkit to reduce predation of nests and chicks, it has proved extremely difficult to increase breeding success. The primary reason why the population is now increasing is because head-starting, a novel tool where you rear godwits in captivity and release them at fledging, has provided a huge boost to breeding success. In addition, head-started individuals now make up a considerable percentage of the breeding population. This has also expanded into newly created wet grassland sites, increasing the overall resilience of the population.

There was time for few questions for Jen, with particular interest in the head-starting method used to boost breeding populations. There then followed a short break before the 'Club Business' session in lieu of an official AGM,

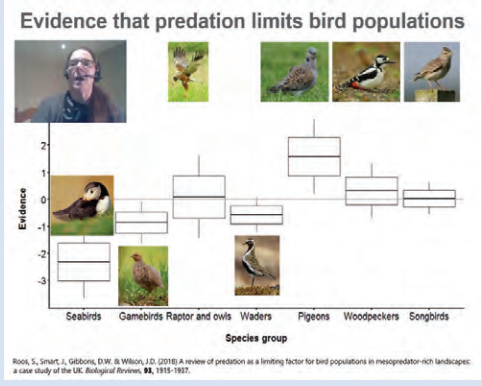

Plate 28. Jennifer Smart.

which was not possible because the SOC Constitution requires the AGM to be held in person. Ian Bainbridge welcomed the 36 members who had returned to attend the session and took this opportunity to announce that because of of ongoing health issues, he had taken the very difficult decision to stand down as President. Ian handed over to Club Secretary, David Lindgren, to reflect on the past year's activities. The reporting year began in April 2020, coinciding with the COVID-19 outbreak taking hold. David commended staff and volunteers around the country for the way they adapted swiftly to the challenges - switching to home working and making good use of online platforms for communications and activities. A positive in a difficult and extraordinary year was the resilience of the Club and, in particular the membership, with support remarkably remaining at pre-pandemic levels. We not only adapted but moved forward, making two new staff appointments - Visitor Experience Officer, Shenaz Khimji, completing the front-of-house team at Waterston House; and full-time Birding and Science Officer, Mark Lewis. We also progressed work to launch a digital version of the Club's journal. Another positive was national recognition of the SOC's mobile app for which the SOC gratefully received the prestigious BTO Marsh Award for Local Ornithology.

David handed over to SOC Treasurer, Rich Kerr, who had been co-opted to Council in June, taking up the reins from Andrew Thorpe. Rich relayed the welcome news that the Club's Statement of Financial Activities (SOFA) showed an increase in net funds in the year to 31 March 2021, compared to a deficit the previous year. This was largely due to a stark difference in the performance of our investment portfolio. Operating income was running at a slight deficit - Waterston House being closed to visitors affected sales income, while expenses (e.g. insurance and salaries) still had to be paid. Local Government COVID-19 grants totalling £37k greatly helped to plug the gap, as did the launch early in the pandemic of the SOC Online Art Shop. Rich finished with some notes on the Club's current financial position, since we were now well into the new financial year: our investments continue to go up in value and, importantly, membership has increased slightly. Concerning membership, Rich pointed to the subscription rates review scheduled to be carried out by the Finance Committee early in 2022. Ian Bainbridge thanked Rich for his excellent summary, remarking how quickly he had got to grips with the Club's accounts. Ian also noted the SOC's thanks to Andrew Thorpe for his work as Treasurer over the reporting year. David Lindgren took attendees through the additional changes to Council this year: Rachael Wilbourn came on board as Tayside Branch representative, and Bob McGowan stood down as Elected Member having been re-elected several times. Bob was thanked for his many years of service, and Hannah Lemon was welcomed as Bob's replacement. Prof Will Cresswell, due to retire by rotation in 2021, kindly agreed to continue. Zul Bhatia (SOC Council member and Clyde Branch Chair) then gave a heartfelt vote of thanks to Ian Bainbridge for his excellent leadership of the Club over the past three years - a sentiment echoed by all present. The session ended with a diary date: the next meeting, which would hopefully be in person, at the Atholl Palace Hotel, on Saturday 26 November 2022.

Ian Bainbridge opened the session on Sunday afternoon before handing over to SOC Council member Dr Chris Wernham to chair the session.

Working for waders

Mark Wilson - Senior Research Ecologist, BTO

Mark pointed out that with less than a third of the UK's land mass, Scotland supports more than 50% of the UK's common breeding waders. These face a variety of threats related to habitat change, farming operations, and predation. The Working for Waders initiative aims to foster collaboration between diverse stakeholder groups and to promote and support action for Scotland's breeding waders. Several new types of survey method are being trialled, aiming to get new audiences like gamekeepers and farmers involved in monitoring, or to improve our understanding of patterns in wader breeding success. Maps are being developed to demonstrate the spread of breeding wader work being carried out across Britain, or show where the highest concentrations of breeding birds occur, to help avoid negative impacts of tree

Plate 29. Mark Wilson.

planting and other activities. Ultimately, the aim is to weave these separate strands of work together, so that decisions about breeding waders can draw on evidence from a wide range of sources and stakeholders. Besides improving outcomes for waders, building a shared body of evidence can increase trust and respect among those who contribute to it. In the conflict-scarred landscape of Scottish conservation, this could have positive effects that go beyond improving the lot of breeding waders.

Working together to combat wildlife crime

PC Gavin Ross - Scottish Investigative Support Officer, National Wildlife Crime Unit (NWCU)

Gavin began by explaining the structures of the NWCU and Police Scotland's Wildlife Crime Officers before moving on to cover Operation Wingspan, Police Scotland's year-long initiative to reduce incidents, increase detections, and raise awareness of the seven wildlife crime priorities: bats, fresh-water pearl mussels, poaching and hare-coursing, CITES (the Convention on International Trade in Endangered Species of Wild Flora and Fauna), cyber-enabled wildlife crime, badger persecution, and raptor persecution.

Next up was a synopsis of Operation Tantallon, a live investigation into theft of wild Peregrines from Scotland for the falconry trade, with an emphasis on the key part that intelligence is playing in the investigation, particularly intelligence from raptor study group members. Gavin emphasised that partnership work between various organisations and individuals has been vital, since no single organisation would have been in a position to investigate the cases alone. Intelligence was further explained: who, what, where, why, when and how, and Gavin appealed for suspicions to be passed to the police, since that may be the vital missing piece of the jigsaw.

Plate 30. PC Gavin Ross.

He ended with an assurance regarding how seriously wildlife crime is taken by the police: should anyone come across a crime in progress, they should report it immediately via 999. Gavin reminded the audience to remain safe, observing rather than confronting those committing the crime. Gavin is happy to answer any questions about his talk and wildlife crime in Scotland in general: gavin.ross@nwcu.pnn.police.uk

SOC Council member, Nina O'Hanlon, chaired the day's final session, looking first at avian and mammalian predation in the Cairngorms; delegates would then hear from NatureScot's CoP26 Coordinator, providing an apt end to this year's biodiversity- and conservation-themed conference.

Cairngorms Connect Predator Project

Kenny Kortland - Wildlife Ecologist, Cairngorms Connect

Cairngorms Connect (CC) is a partnership enhancing the ecological condition of 600 km² of land in the western Cairngorms National Park. The partners are Wildland Ltd, RSPB Scotland, NatureScot, and Forestry and Land Scotland (FLS). The Cairngorms Connect Predator Project (CCPP), which commenced in 2017, is part of this work and is led by FLS and Aberdeen University. Over the last 20 years, avian and mammalian predators have increased in the CC area, with breeding Goshawk and White-tailed Eagle recolonizing the site after a long absence. The influence of vertebrate predators on the structure of ecological communities is increasingly recognised. The CCPP aims to understand some aspects of the novel predator guild in the CC area, such as diet and impacts on prey species that are conservation priorities e.g. Capercaillie. Using various field methods, including cutting-edge genetic approaches, several Masters and PhD students have been working under the CCPP umbrella. So far, they have confirmed that Pine Martens and Foxes mainly eat Field Voles, with deer gralloch and amphibians as key alternative prey. Foxes also consume faeces left by domestic dogs, thereby providing a useful cleaning service! Priority species like Capercaillie and Red Squirrels form a tiny part of their diets. Other findings include Foxes eating Pine Martens, and Goshawks eating Jays, which may confer some benefit on Capercaillie. The studies continue, and much remains to be learned.

Plate 31. Kenny Kortland.

Plate 32. Debbie Bassett.

Where next after Glasgow CoP26?

Debbie Bassett - Climate Change and CoP Coordinator, NatureScot

The Conference of Parties in Glasgow aimed to keep the overall ambition of 1.5°C rise within reach. Two weeks of talks with themed days including energy, finance, and nature resulted in many commitments and promises to increase effort in all areas. The results from CoP26 suggest a 2.6°C rise in average global temperature. For Scotland, this will mean increasing temperatures, increased severity of droughts, particularly in the east, and increasingly unpredictable rainfall. All will have an impact on our nature, especially since we have almost confined it to relatively small patches of protected sites and whose very climate will rapidly change. We need to embed more of nature everywhere; in commercial forestry, in our upland management, across all our farmed landscapes, and in how we manage the seas, to ensure that nature can contribute at least 30% towards Scotland's net zero target. This will require a huge transformation in the way we manage all land and sea, and requires us to employ a 'nature first' principle if we are to bend the curve of biodiversity loss and secure a more stable climate in the future. Employing nature-based solutions will enable us to meet the needs of nature, climate and people.

It was back to Chris Wernham, who did her usual excellent job of summing up and providing the audience with thought-provoking and encouraging parting words. She began by thanking the speakers for giving their time and for sharing their expertise and passion; Friday's quiz masters for a fun and challenging evening's entertainment; her fellow Council members on the conference organising working group (Will Cresswell, Nina O'Hanlon, and Jeremy Wilson) who also kindly helped to chair the sessions; and Wendy and the team at HQ for coordinating the event.

Mindful of the electricity Zoom participants were using, Chris did not give give detailed summaries of all the talks, but hoped all agreed that the conservation theme of this year's programme was a fitting one, given the proximity to the Glasgow CoP26 meeting and the urgency of addressing the dual crises of climate change and biodiversity loss. Here the speakers covered a wide range of issues, starting with the big picture in Tom's talk, thinking about solutions at landscape scale. We heard about positive conservation and restoration approaches across a broad range of species, bird groups and habitats, and how we address specific threats, such as wildlife crime. Another strong theme was the importance of volunteer recording and monitoring: without long-term monitoring data, we couldn't demonstrate (with such solid and compelling evidence) to policy makers and the general public the rapid and global declines in wildlife. Without such data we cannot evaluate the success of our conservation solutions and the restoration work needed to reverse these declines and make our activities on Earth much more sustainable. To demonstrate what can be done with long-term monitoring data, Chris pointed to work published by BTO to coincide with CoP26: www.bto.org/our-science/publications/research-reports/climate-change-and-uks-birds

Ending on a personal note, Chris shared a photograph taken that morning - a serene image of Gartmorn Dam country park, her local patch. A small example, she explained, of how a large area of community woodland has been restored over 20–30 years to become a thriving habitat for birds and other wildlife, including Beavers! And there are much larger scale restoration projects across Scotland, such as Cairngorms Connect. So, all in all, we have reason to be hopeful and optimistic if we continue to do as much as we can ourselves, praise others, celebrate their achievements in conservation, and endeavour to transfer our knowledge, skills, and passion to the younger generation, who are the future of conservation in Scotland.

NEWS AND NOTICES

New members

Ayrshire: Mr B. Broadley, **Central Scotland:** Mr M. Cousins, Mr & Mrs D. Higgins, Miss A. Parker, **Clyde:** Mrs K. Doherty, Mr J. Dryden, Mr C. Duncan, Ms H. Griggs, Miss R. Henderson, Mr M. Hickford, Miss H. Kay, Mr J.D. Lennie, Mr J. McOwat, Dr M. Newdick, Mr A. Perry, Mr D. Price, Mr T. Stewart, Mr R. Wall, **Dumfries:** Ms R. Corbett & Mr M. Shire, Mr Q. Cox, Ms M. Lord, **England, Wales & NI:** Mr P. Armstrong, Mr C. Bowden, Mr J. Dibbs, Mr M. Reed, **Fife:** Mr P. & Mr G. Boswell, Mr A. Duncan, Miss J. Glencross, Miss A. Harvey, Dr G. Lees, Ms S. Scarlett & Mr A. Cairns, Ms L. Scott, Mr R. Simmonds, Mr & Mrs D. Sommerville & family, **Highland:** Mr J. Campbell, Dr T. Dowson, Mr A. McCall, Mr M. Rensner, **Lothian:** Mr T. Beckett, Mr & Mrs G. Blackett, Dr & Mrs M. Brander & family, Miss H. Care, Mr A. Challis, Mr & Mrs J. Connelly, Miss C. Conner, Miss A. Fletcher & Mr G. Mullins, Mr & Mrs P. Hawkins, Dr D. Horsburgh & Ms K. Collingridge, Mr & Mrs J. Hyne, Ms J. Joganic, Mr T. Kicks, Ms I. Macleod, Mr M. McConkey, Mrs M. McHarg, Mr & Mrs A. Muir, Mr & Mrs A. Murphy, Mr C. Pertusi, Mr M. Schaffer, Ms A. Somervell & Mr A. Storer, Rev P. Stanway, Mr & Mrs G. Taggart, Mr J. Withington, **Moray:** Ms S. Cooper, Mr & Mrs R. Maxwell, Mrs G. Roles, **North-East Scotland:** Mrs E. Baird, Mr & Mrs A. Dobson, Mr R. Edwards, Miss C. Tomlinson, **Orkney:** Mr R. Ford, **Scotland - no branch:** Mr J. Sedgwick, **Tayside:** Mrs V. Franz, Mr & Mrs J. Vyvyan-Robinson.

Plate 33. SOC participants on VSAS course, September 2021. © *Mark Lewis*

SOC Annual Conference, 25–27 November 2022, Atholl Palace Hotel, Pitlochry

We look forward to proceeding with an in-person event in Pitlochry, as planned, and in accordance with any Scottish Government COVID-19 regulations that may be in place at the time. The theme of this year's event will be raptors, to coincide with the 20th anniversary of the Scottish Raptor Monitoring Scheme. Programme and booking information will be circulated with the June issue of *Scottish Birds* and notice emailed to members on our Club News mailing list.

SOC/VSAS seabird ID courses

The SOC has teamed up with the Joint Nature Conservation Committee (JNCC) to offer Club members the opportunity to take part in the Committee's highly regarded Volunteer Seabirds at Sea (VSAS) scheme. VSAS surveys take place on ferries and collect data on the distribution and numbers of seabirds and other marine wildlife in Scotland's seas. There are currently four Western Scotland ferry routes and there are plans to expand coverage into other areas soon. These surveys are a great way to see some of our iconic seabirds and landscapes, with potential for the odd rarity too. JNCC offers free training to those who would like to take part in surveys. If you think you may be interested in taking part and would like to be kept informed of upcoming courses, please contact SOC Birding & Science Officer, Mark Lewis: birdingofficer@the-soc.org.uk or leave your details with office staff at HQ by calling 01875 871330.

Waterston House update

Opening hours: Wednesday to Sunday 10:00 hrs to16:00 hrs
Please check the SOC website for any updates to opening hours and facilities available when planning your visit: www.the-soc.org.uk/about-us/getting-here-opening-hours. Admin staff can be reached Monday to Friday 09:00 hrs to 17:00 hrs and weekend staff 10:00 hrs to 16:00 hrs on 01875 871330.

Art Exhibitions

'Looking West' by Jane Smith and 'Under the Skin' by Ed and James Harrison - 3 March–24 April 2022 - A new collection of screen prints by Jane Smith is inspired by the west coast of Scotland, with the prints illustrating the influence of the sea on all wildlife.

Plate 34. Under the Skin, Yellow-crested Cockatoo. © *Ed & James Harrison*

'Under the Skin' is rescheduled from last year and presents a series of UV-sensitive screen prints, which are displayed in our gallery corridor. Developed by brothers Ed and James Harrison, in collaboration with conservation charities, these artworks raise awareness and funds for endangered species.

Plate 35. Hebridean Summer. © *Jane Smith*

Plate 36. Watching over the city. © *Kittie Jones*

Plate 37. A tiny dream, Bald Eagle nestling. © *Wynona Legg*

Kittie Jones & Wynona Legg - 27 April–5 June 2022 - SWLA members Kittie Jones and Wynona Legg present a joint exhibition of work created during lockdown. While Kittie explored every corner of her local environment, Wynona drew animals via webcams from around the world.

Artwork available online
The SOC Online Art Shop presents an ever-changing selection of unframed works such as drawings, prints and watercolours by our regular exhibitors, some of the best wildlife artists in the UK: www.the-soc.org.uk/online-shop

Audubon's Birds of America exhibition, National Museum of Scotland - showing until 8 May 2022 - A new exhibition at the National Museum of Scotland, Edinburgh, presents 46 unbound prints created by John James Audubon (1785–1851), as well as a rare bound volume of the book, on loan from the Mitchell Library. This is a unique opportunity to see so much of Audubon's work in one place. SOC members have been offered a 20% discount when booking tickets online at: www.nms.ac.uk/birdsofamerica (Quote the promo code 'SOC20').

Plate 38. White-throated Sparrow (detail), *Birds of America*, by J.J. Audubon. © *National Museums Scotland*

Branch Updates

Orkney, change of Local Bird Recorder
Jim Williams, Fairholm, Finstown, Orkney, KW17 2EQ. Email: jim.geniefea@btinternet.com Tel: 01856 761317. The previous Recorder, Russell Neave, has kindly agreed to assist with rarities records for the islands, via Jim.

Chair vacancy - Borders
Martin Moncrieff, the current Chair of the Borders branch, has held this position for the last three years and would like to step down at this year's branch AGM (April) in order to devote more time to his other role as joint Local Bird Recorder. If there is any member out there who would like to serve as Chair, the Committee would be delighted to have a chat with them to explain the role.

Don't be bashful, don't hide your light under a bushel; step forward and inject some new blood into our pale, male and stale deliberations! Please contact Branch Secretary, Neil Stratton: neildstratton@btinternet.com

Recorder vacancy - Perth & Kinross
After many years at the coalface, Scott Patterson has stood down as Local Bird Recorder for Perth and Kinross. We'd like to say a huge thanks to Scott for all of the hard work he's put in over this time. The position has been vacant since 1 January so if you are interested in taking up the reins then please get in touch with SOC Birding and Science Officer, Mark Lewis: birdingofficer@the-soc.org.uk In the meantime, if you are birding in Perth and Kinross, please safeguard your data for use by conservation bodies and Scott's successor by entering your sightings on www.bto.org/our-science/projects/birdtrack.

Clyde Branch Website - www.birdsinclyde.scot
A fantastic new resource for anyone interested in birds and birding in the Clyde area has taken flight! The birdlife of the Clyde is brought to life both visually and artistically with stunning photographs from local members gracing each of the pages, and striking artworks of Tommy Daniels peeking out in places.

Launched in mid-January, the Birds in Clyde website was designed and developed after a huge effort by Clyde Branch volunteers Emma Anderson, Zul Bhatia, Rebecca Dickson, and in particular, Kevin McCormick, the technical and development lead, with SOC Development Officer, Jane Allison, providing project support.

Already one of the most popular pages on the platform, 'Latest Sightings' www.birdsinclyde.scot/recent-sightings.html catalogues the many

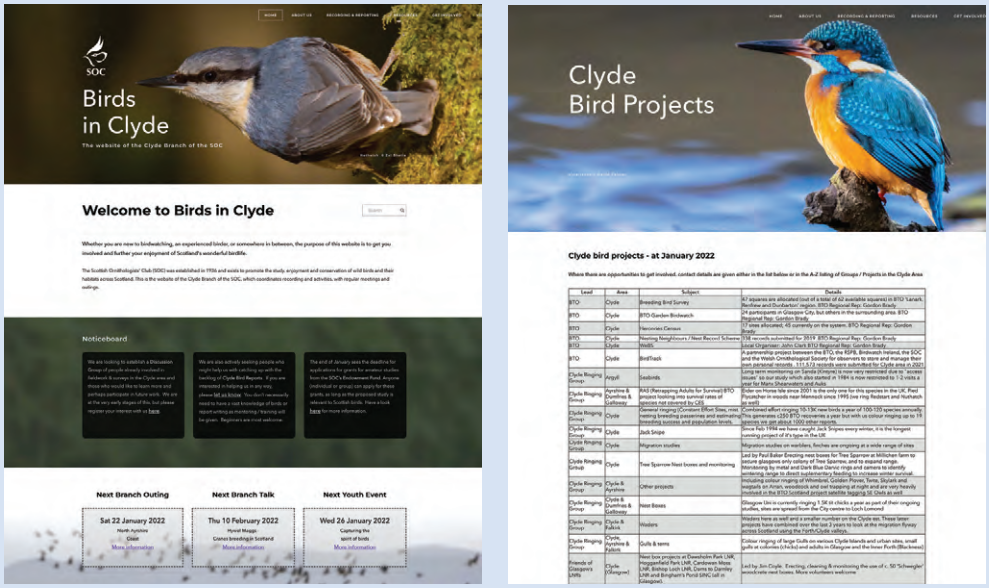

Plate 39–40. Screenshots of the new Clyde Branch website.

and varied ways members can keep abreast of bird sightings in the region, from WhatsApp, to email, to social media. There's also a handy step-by-step guide for recording and reporting the birds you see, and a host of useful associated resources. For anyone keen to get more involved with the Branch and other projects locally, a wealth of suggestions awaits under the 'Get Involved' tab.

There is much to explore, discover, and delight, and the site will continue to grow and develop with details of any updates posted on the site's home page.

Highland Bird Report 2020 (digital)

The latest report, published in mid-December, is available free to download from the Highland Birds website: www.highlandbirds.scot/highland-bird-report

Council updates

Ian Bainbridge steps down as SOC President

I have known Ian for a very long time, as we were RSPB Colleagues for many years. More recently, I have seen him 'in action' at our SOC Council meetings every quarter since he took up the post of President in 2018. I also know him and his wife Carole in a personal capacity as we are all keen on growing Alpines. We have visited each other's gardens and I have received quite a few plants from them. They are in a different league from me, however, as they are both leading lights in the top brass of the Scottish Rock Garden Club, are eagerly sought after as judges at plant shows, and have a fabulous garden at Gatehouse of Fleet full of rare and 'difficult' plants.

A long-standing member of the SOC, Ian brought a formidable amount of experience to his role as SOC President. He has worked in conservation ecology for 35 years, having had senior roles with Northumberland Wildlife Trust, RSPB Scotland (Head of Research), Scottish Government (Chief Ecological Adviser) and Scottish Natural Heritage, now NatureScot (Head of Science). He is a Fellow of the Chartered Institute of Ecology and Environmental Management and was chair of the UK Scientific Working Group on Special Protection Areas for 15 years. A ringer for over four decades, Ian sat for many years on the BTO Board and was Chair of BTO's Ringing Committee.

The President's duties are normally pretty extensive anyway, but Ian has had to cope with the extra challenges for the Club brought about

by the COVID-19 pandemic. His past experience has been invaluable in keeping the SOC compliant with various legal responsibilities, especially with our status as a Scottish Charitable Incorporated Organisation and overseeing our budget. He arrived at a time when the SOC was undergoing a significant strategic review, and he played a full part in that. He was also involved in the appointment of the SOC's first full-time Birding and Science Officer - an achievement of which I know he is very proud.

Plate 41. Ian Bainbridge receiving his leaving gift, presented by SOC VP, Lesley Creamer. © *Carole Bainbridge*

His extensive knowledge of Scotland's wildlife, locations, and habitats built up over many years was widely admired and respected. With his large network of relevant personal contacts and his interest in working with many others, Ian was well placed for outreach with Club members and the general public. I have heard from several people about how he inspired them in the early stages of their birding. Over the course of his long career in birding and conservation, he will have encouraged so many more.

In short, Ian has been a great ambassador for the SOC, and it is such a great shame that he has been forced to step down from the role for reasons of ill health. With his birding and plant activities, I am sure he won't be bored, and on behalf of Council, we wish him all the best.

Zul Bhatia, SOC Council
(Clyde Branch Representative)

New Elected Member - Hannah Lemon

Council is delighted to welcome on board SOC Central Scotland member and young birder, Hannah Lemon, who was co-opted as Elected Member at the Club Business session at the virtual annual conference in November. Hannah's appointment is due to be ratified when we are able to have an in-person AGM, planned for 26 November 2022.

Over the last five years in particular, the Club has worked hard to engage, support, and develop birdwatchers in the early stages of their passion and careers, with initiatives such as the Young Birders' Training Course (YBTC), the SOC/BTO Scotland Youth Events Programme and Scottish Bird Camp, as well as offering subsidised student membership and conferences places. We are committed to making strides in this area, and are acutely aware of the importance of the young birder voice in shaping the future of the Club.

An SOC member and a past YBTC participant, Hannah is very familiar with our work and has been a regular attendee at branch talks and Club conferences. When invited to join Council, Hannah gave an enthusiastic response: "I have total admiration for the work carried out by the SOC and have always felt very welcomed by the Club. The SOC has been remarkable in providing me with some amazing opportunities and so I am delighted to take up this role".

Plate 42. Hannah Lemon © *Daniel Henderson*

Hannah replaces Bob McGowan who stood down in November after eight years serving as a Trustee. Council thanks Bob for his invaluable contribution over the years, which has latterly included being part of Council's Appointments Panel.

A full list of Council members and its sub-committees can be found on the Staff, Committees and Office Bearers page on the SOC website: www.the-soc.org.uk/about-us/staff-committees-office-bearers

Remember your free digital copy of *Scottish Birds*!

You should have already received an email from us with details of how to access your digital copy of this issue of the journal as well as your accumulated recent back issues. If you haven't received the email or are experiencing any issues with setting up or accessing your *Scottish Birds* Online account, please contact Kathryn Cox (admin@the-soc.org.uk).

Thanks to Stuart Rivers

In January 2002, Stuart Rivers joined the *Birding Scotland* editorial team where he contributed significantly to its success during the final five years, before it eventually merged with *Scottish Birds* and *Scottish Bird News* in mid 2009. After 20 years of high-calibre contributions, to both *Birding Scotland* (20 issues) and *Scottish Birds* (52 issues), Stuart is stepping down from his editorial role to now focus on his many other ornithological projects. Thank you Stuart, for all your hard work and countless contributions over many years, making *Scottish Birds* the success it is today!

Seeking new SBRC committee member

The Scottish Birds Records Committee (SBRC) is seeking a new member to replace David Pullan, who retires later this year. To maintain geographical representation across the country SBRC would prefer a candidate from eastern areas of Scotland. Any potential candidates should send their name to the Secretary (Chris.McInerny@glasgow.ac.uk). If more than one name is put forward, a ballot will be instigated, with Local Bird Recorders having one vote each.

Chris McInerny, on behalf of SBRC

OBITUARIES

'D.I.M.' Wallace: Donald Ian Mackenzie Wallace (1933–2021)

With the passing of Ian Wallace, we have lost a giant of post-war British ornithology. A charismatic, tall figure in his tam o' shanter, and often wearing a kilt, Ian was held in great affection by those lucky enough to know him. A prolific writer, lecturer, and an accomplished artist with both pen and paint brush, he contributed so much in so many ways.

Born in Norfolk on 14 December 1933 to Scottish parents, Ian's prep school was outside Edinburgh, followed by Loretto in Musselburgh. Here he was invited to join the Midlothian Bird Club, forerunner of the SOC, and with his school friends birded the East Lothian shoreline. He also joined outings led by more experienced birdwatchers such as George Waterston. Ian's father was a birdwatcher and he took his son to Shetland aged four, where they viewed the vast seabird colonies. In 1951, he visited the Fair Isle where he trapped birds with Ken Williamson, first Director of the Bird Observatory, and came under the spell of the visiting Maury Meiklejohn, who in a quiet period taught him some invaluable field-craft in finding Lapland Buntings along field furrows. National Service in the early 1950s with the King's African Rifles in Kenya was an ideal opportunity for Ian to study wintering migrants as well as coping with the Mau Mau rebellion.

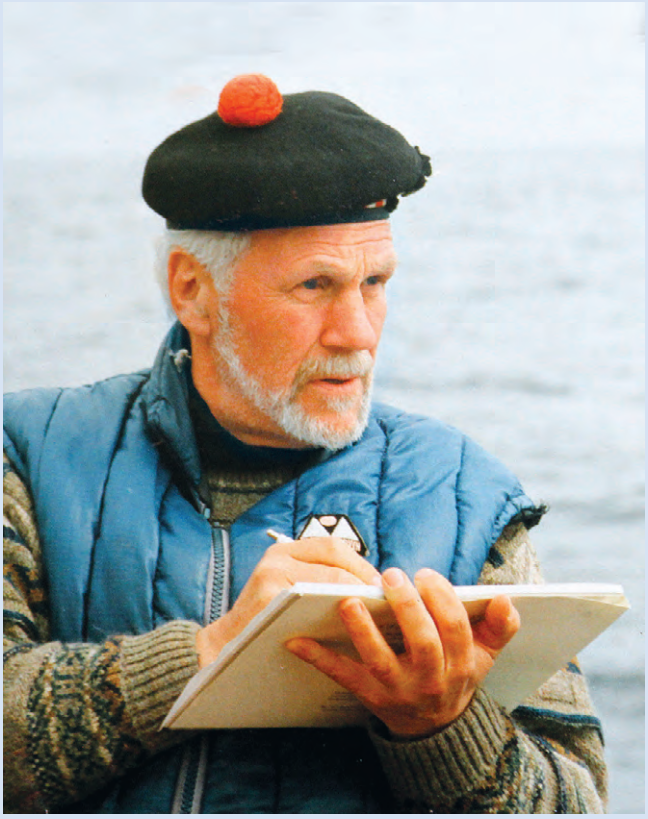

Plate 43. D.I.M. Wallace on board 'Ocean Bounty', 1986. © *Barry Barnacal*

At Cambridge University from 1954 to 1957, Ian naturally joined the Cambridge Bird Club where he met future SOC members John Arnott, Dougal Andrew, Chris Mylne and David Wilson. As keen young birders, they scoured the Cambridgeshire countryside for interesting birds, checking Wisbech sewage farm for rare waders. The chance to visit St Kilda in July 1956 was not to be missed. Three expeditions were arranged that summer by teams from Cambridge/ Edinburgh Universities to study the Natural History post evacuation of the island in August 1930. Ian's group included David Wilson, John Arnott, and Dougal Andrew.

After Cambridge, Ian held a variety of jobs, including three years in Nigeria, where he added at least four new bird species to the national list, and a marketing post with Mac

Fisheries Ltd in Hull. Spring and autumn holidays were often spent on Scilly when it rivalled Fair Isle for extreme rarities, and it was on Gugh in the mid-1960s where I first met Ian. One year, our Wirral group, led by his old friend John Raines, competed with Ian's team to find the rarest migrants. A certain rivalry followed, but it is too long ago to recall the outcome! More than 30 years after first visiting St Kilda, Dougal Andrew chartered a converted trawler 'Ocean Bounty', and seven annual two-week Hebridean voyages followed. I was invited along with Ian on two of them, and we made successful landings again on St Kilda, North Rona, Sula Sgeir and Mingulay amongst other isolated islands. During the evening log disputes over numbers and even species, when we were liberally refreshed with copious amounts of port and malt whisky, Ian would regale us with his experiences and stories.

According to a WWT exhibition flyer, Ian drew his first bird in 1937. His published illustrations date from 1955, and in 1964 he became a founder member of the Society of Wildlife Artists. Ian's ability to pick out the finer points of bird identification and bird behaviour resulted in him writing and illustrating two breakthrough papers in *British Birds* on *Hippolais* warblers, and another on small stints ('peeps'). As his reputation grew, he was invited by Stanley Cramp to provide the Field Characters sections for the *The Birds of the Western Palearctic* for which he also painted several of the plates. This led to him writing the text for a slim volume *Birds of Prey of Britain and Europe* (1983).

Ian's connection with *British Birds* magazine was long and well known. In 1962, given his interest in and undoubted knowledge of rare birds, he became one of the 'Ten Rare Men' who adjudicated on rarities found in the UK. Within a few years, he was responsible for the species comments and later his pen drawings enlivened the text in the *British Birds* Annual Rarities Reports. In 1971 he stepped down from the committee following a temporary career move to Nigeria, but re-joined on his return. He was chairman until 1976, continuing as a member until 1981. By 1979, Ian had become a full-time writer and illustrator of bird books. Titles included *Discover Birds* (1979), *Birdwatching in the Seventies* (1981) and *Watching Birds* (1982). He was a popular contributor to both *Birdwatch* and *Birdwatching* magazines, with his vast experience giving encouragement to birders new and old.

Keen to expand his knowledge of Palearctic birds, Ian travelled widely throughout Europe and the Middle East. An early trip to Lapland with Cambridge colleagues was followed in 1963 by an invitation to join Guy Mountfort and James Ferguson-Lees on an expedition to Jordan, described in Mountfort's *Portrait of a Desert* (1965). Sometimes controversial but always thought provoking, Ian's talks were popular at BTO/RSPB/SOC conferences and the Rutland Bird Fair. At these events, he always took great interest in pioneering efforts to expand knowledge of bird migration, be it on Barra, Unst, Foula or his own autumn visits to Donegal with Anthony McGeehan and others. Ian was never particularly a twitcher, but supported and encouraged patch birding. An early site was Frampton Warth, Slimbridge, in the mid-1960s. Another was Flamborough Head, where he spent many hours sea watching and working the fields and bushes. In recent years, his patch was in rural Staffordshire.

His last book *Beguiled by Birds* (2004), part-autobiography and part-history of British birdwatching, is a brilliant survey of the early history and rise in post-war birding, the twitching scene, and proliferation of books, handbooks, and guides. He painted close on 170 paintings for this volume, most of which capture the subject perfectly, as well as sourcing dozens of historic photographs of people and places.

In 1958, he married Karin Bryde-Williams and they had two daughters, Petra and Kirstie. A few years after his divorce in 1984 he married Wendy Stephens, with whom he had another daughter, Helen. Very sadly, Wendy died in 2020. The doyen of British birding reached his 88th year before passing away in his sleep on 4 November 2021. Always very proud of his Scottish roots, Ian will be fondly remembered for his good humour, erudition, and deep knowledge of birds and birders.

David Clugston

James (Jim) L.S. Cobb (1941–2021)

James Leslie Stiles Cobb was a wartime baby, born in Sussex on 27 August 1941. He was conceived, apparently, when his father sneaked home from a local military training exercise. James died on 15 August 2021 of heart failure and pneumonia, and leaves a wife, Calla, and three daughters – Emily, Caroline and Victoria – and their families.

Following formative years in Sussex, James's family moved to Brecon, Wales, where James attended Christ College. Ironically, given his later academic career, school was the fly in the ointment for James. His future was secured in Brecon, however, for it was there that he met Calla, who became his soulmate and wife of 55 years.

After a difficult first year at Queen's College, Dundee (now Dundee University), James found his feet at St Andrews University, the more so when Calla also arrived to study there. James graduated with a first class honours degree in botany and zoology and was awarded the prestigious D'Arcy Thompson Medal. He progressed his undergraduate honours studies into a PhD and, very unusually for the time, was asked to present a paper at the Royal Society when only halfway through his PhD. This led to the award of a Queen Elizabeth Fellowship, which took James and his young family to Australia for two happy years of academia, barbies and hobby gold prospecting.

Plate 44. James at the Ringing Hut, Fife Ness, Fife, September 2010. © *Alan Lauder*

James returned to St Andrews in 1969 to join the Zoology Department. There he studied echinoderm nervous systems and was based largely at the Gatty Marine Laboratory, eventually becoming senior lecturer. His great passion was teaching, at which he was inspirational; he was held in great esteem by generations of students who were regularly treated to slap-up meals at the family home in Kingsbarns - a house purchased, gutted, and partly restored by his own hands.

Kingsbarns was where James and Calla developed their love of gardening. James was internationally known as a plantsman, in particular as a published world authority on the genus *Mecanopsis*. A long-standing member of the Scottish Rock Garden Club, he exhibited widely and successfully at Scottish flower shows. He inspired a future generation of gardeners through his involvement for a time with the Junior Horticulturalists at the botanic gardens in St Andrews.

In addition to his gardening expertise, James was also an enthusiastic beekeeper, undertaking a fraught transhumance twice a year in a rickety car to the Angus Glens for the flowering heather. He enjoyed fly-fishing and, for a time, off Kingsbarns Beach he ran some lobster creels which he accessed in a wet-suit.

In an ornithological context, James will be remembered for his work on Fife birds, and especially for his far-sighted purchase of a piece of rocky 'wasteland' east of Crail, known locally as Spion Kop after a Boer War battle. Here at Fife Ness he was able to indulge two of his great loves: tree planting (most reared in his own

nursery) and bird ringing. James had been taught to ring in Brecon as a teenager, and he was an expert and natural bird handler. Some of his happiest moments were spent at 'Jim Cobb's Patch' at Fife Ness in any October 'fall' when, in south-easterly winds, thrushes tumbled in their hundreds from leaden skies into his trees, and newly-arrived Robins 'ticked' from his bushes. James welcomed visitors here and always had time for a chat, enthusing to onlookers about the marvel of migration happening before them. What he learned about tree planting and nurture in this salt-spray environment was put to good use when he was enlisted by the Isle of May Bird Observatory as it embarked on its own tree planting exercise. In addition to his Fife Ness migrant studies, James was also involved in ringing Storm Petrels and waders on the rocky shore there; at nearby Kippo Plantation he undertook an extended project on Willow Warblers alongside a long-running Constant Effort Site. Arguably, through bird ringing, his gift for teaching was extended and perhaps even best highlighted. His enthusiasm, patience, generosity and skilled mentoring led to many of his trainees and, in turn, many of their trainees being not just trained, but fully immersed and inspired. Being a trainee of James's is to have been taken under a wing and given a gift in perpetuity. Many of his former trainees remain active in Scotland, and some much further afield.

What makes a good life? It is hard to dispute that the key is leaving the world a better place. James Cobb, through his many and varied interests, and with the support of his loving family, built a web of friendships that endured despite a long illness. He gave unselfishly of his time to teach and support others: and he left many people and organisations the better for his presence.

Tom Dougall, Alan Lauder, the Cobb family

The Patch at Fife Ness

An ornithological legacy of Dr James Cobb

The Patch at Fife Ness is well known amongst birders as one of Fife's best migrant bird sites, with a long list of rarities and providing refuge for large numbers of common passage migrants in fall conditions.

The Patch, in its current form, owes it origins to the single-minded determination of the late James (Jim) Cobb. Despite many folk telling him trees would never grow there, Jim proved them wrong. Over the course of some 50 years, The Patch developed into a small woodland area holding a diverse community of trees and shrubs entirely planted and nurtured by Jim. He worked closely with the Crail Golf Club over the years as his direct neighbour, and now many of the best bird and ringing sites are on the 'triangle', a small area of land owned by the golf club and planted up by Jim. The site was gifted by James to the Scottish Wildlife Trust, and now forms part of its chain of coastal reserves in Fife, lying close to nearby Kilminning reserve.

Sadly, James passed away in August 2021. The authors, both originally trained to ring by James (Tom from 1978 and Alan from 1993) and now ringing trainers themselves, were fortunate to have a long and very enjoyable lunch with James and his wife Calla just prior to initial COVID-19 restrictions in March 2020. They took the opportunity to capture James's thoughts on the development of The Patch through an informal, recorded, interview and this article recounts that discussion. For brevity, and perhaps to spare some blushes, James's answers are paraphrased!

A&T: James, tell us about your first discovery of The Patch and how it started to take shape.
J: I first visited in 1962 as a 21 year old before heading to Oz to teach (I was there from 1965 to 1967).There was only grassland and patchy Gorse covering a large stone pile and ditches in those early days, and the site was occasionally set alight by the resident in the adjacent cottage

on the shore. I started ringing there again in 1968, along with the planting. It was a very different place, with no golf course, caravans and no trees.

A&T: Tell us more about the early days, and your early experiences there.
J: I started planting up straight away. I took Gorse out, put in Elder (salt-tolerant, quick grower, good cover, berries), Sea Buckthorn (ditto). Salt spray was definitely a problem, so I planted conifers at the east end to provide protection from salt-spray in easterly winds. The site was owned by the County Council and I had permission to ring and plant there.

During the war it had been used for military training, with trenches dug.

Ringing was with mist-nets only in early days, with the main net where the hut now is, and another where the east trap now is. As the trees grew up, new rides were established over the years.

Back then, the breeding species were Meadow Pipit, Stonechat, and Yellowhammer. Corn Bunting didn't breed on patch, but were present in autumn and winter. With the site more like woodland now, there are many more breeding species, including even occasional Sparrowhawk and Long-eared Owl!

Plate 45. Interest in a migrant Sardinian Warbler on The Patch, Fife Ness, Fife, 16 October 2005. © *Brian Orr*

Living in Kingsbarns, I travelled to and from The Patch often on a moped, in all weathers. Mist net poles (bamboos and metal) were left on site, and incredibly, nothing was ever stolen or damaged.

A&T: And what about rarities and falls in the early years?
J: My first "fall" was in autumn '67, and they were almost annual after that until around 2010. Falls are not common now, probably a change in weather patterns in autumn. Spring falls have always been a highlight for me, with males in lovely breeding plumage, but they are very scarce now. First sign of any autumn fall was always when Robins and thrushes flew along the road in front of my moped, or there were many road kills evident on the journey. On arrival you could hear Robins "ticking" immediately as you left the car at the shore layby.

A&T: What were your biggest and best falls on The Patch?
J: I would regularly see 400–500 birds ringed over 2–3 days in autumn, sometimes more when conditions allowed. Species varied with the time of year, but biggest falls were always in October. Single days could occasionally see 300 birds ringed in a day (AL recalled 100+ Chiffchaffs, 200+ Blackbirds and extras on one 30 September day!). Later on, certainly from the early 1990s, numbers were kept in the birders' log-book at the entrance to the site and later, after building the hut, I also displayed details on a whiteboard placed in the window.

In the big fall of '82 I ringed 300–400 birds per day for a long period, whenever the weather was suitable. Pallas's Warbler was new then but more regular now, and this was the start of regular Yellow-browed Warblers. Common Redstart and Pied Flycatchers were always the marker species for falls, and were normal amongst September falls, but are also less frequent now.

A&T: How about rarities James? What are your earlier memories?
J: The Red-flanked Bluetail in 1975 was memorable, as they were very rare, and at the same time as one on the Isle of May. Then there was the Radde's Warbler on 5 October 1979, which was the fifth ringed in UK at that time, but are "ten-a-penny" nowadays!

Plate 46. The Patch, Fife Ness, Fife - what once had been rock, gorse and grass, August 2007. © *Mark Oksien*

Best spring birds were Bluethroat, both nightingale species, Marsh Warbler, and Icterine Warblers.

I think my Fife Ness maxima were three or four Yellow-browed Warblers in a day, and I've had a few unusual Lesser Whitethroats over the years. Autumn 2003, I had a Blyth's Reed Warbler at The Patch, while Alan had a different one on the Isle of May same day.

Twitchers used to thrash through the vegetation a lot and missed seeing many of the birds when they'd have far better stayed still and let birds come to them. Visiting birders in recent years, from far and near, probably didn't appreciate that the habitat on site was due almost entirely to planting, mainly solo! I planted around 20,000 trees over the years to get what is there now. The Junior Horticultural Society, run with Bob Mitchell at St Andrews University Botanics, produced some trees for The Patch via a nursery there. Most other trees came from my own garden which had a large tree nursery area.

St Andrews University Conservation Group used to help sometimes with habitat management. One regret was that after planting Elders and Sea Buckthorn near the Fife coastal path to provide interest and shelter for walkers, SWT made me remove them from the Kilminning reserve.

AL: Apart from falls and rarities, what were your favourite days at Fife Ness?
J: I really enjoyed evenings ringing waders on Stinky Pool. Sitting in the car with a thermos, checking the nets using car headlights. I put in heavy-duty guy stakes many years ago, and they are still there. Caught a good variety, including Barnacle Goose, Whimbrel, Little Stint and Curlew Sandpiper. Never caught a Purple Sandpiper - they stayed exclusively on the rocks.

I also loved the nocturnal Storm Petrel ringing with AL and Mark Oksien. Plenty of Stormies and the occasional Leach's, but a dark-rumped petrel (perhaps a Swinhoe's) seen to "bounce" twice was never caught.

TD: What about your best recoveries of ringed birds, James?
J: A Song Thrush to Algeria from the 1979 autumn fall was impressive; a few Finnish Goldcrests over the years, and Norwegian Brambling; Song Thrushes to Spain & Portugal were more regular, as were Blackcaps to the Low Countries and Blackbirds crossing the North Sea.

A&T: What has helped the site in more recent decades? Obviously the vegetation has grown up a lot, maybe too tall in some places for effective ringing?
J: I bought the site for SWT from Fife Council, the Golf Club wanted it, so that they could keep folk away from the course, but I had a good relationship with them, advising and carrying out tree planting. The extension of the site to the west on the "triangle" has good scrub for breeders and migrants, and is coppiced on rotation to maintain height for mist-nets.

The ringing hut is important. We used to have to ring in the open, so getting the hut built was very helpful and maintenance of it, along with maintenance of the habitat, will be essential in future. It is good to see that it is happening with local members of Tay Ringing Group (TRG) taking the site on now.

A&T: Talking about the next steps, how do you see the future there James? What would you like to happen?
J: It would be nice to sort out the vegetation in the gully and to repair the Heligoland traps there; plant more scrubby stuff but keep Gorse under control. It needs constant attention. The Heligolands were built in mid-2000s, and need work.

The Patch is still owned by SWT, but they are probably hardly aware of it since they have only ever been vaguely interested. However, this should still provide security of the site as a nature reserve. Perhaps they should really sell it to others who can place it in trust and manage it for its main purpose as a migration site - perhaps to TRG, or even link it up to the Isle of May Bird Observatory as it would be a logical fit with the Observatory.

It has gone full circle now, from David Oliver's early visits now going back to TRG. There can't be many sites manned continuously for 50 years, though it will be difficult to continue that in future.

Calla (James' wife) joined the conversation near the end. She recounted that she and James married in 1965, and recalled that the Minister in Crail at that time suggested 'Spion Kop' (the original name for The Patch) be made into a bird reserve. A local farmer also called it Bluebell Wood, despite no trees! And she mentioned David Oliver referring to some Sea Buckthorn and a couple of pines on the site at that time. Calla recalled the family planting trips, and the planting of Elders, Cotoneasters, Buddleias and Purple Sycamores, not all of which remain.

A&T: Any other thoughts for the future of the site or memories?
J: I wonder why falls have dried up at Fife Ness? There appears to have been no blocking high for at least nine years, but there are still falls on the Isle of May. Maybe because the May is an obvious isolated site compared to the mainland? Or perhaps there are so many more trees nowadays in the Fife Ness/ Kilminning/Crail area.

Fife Ness Muir, Spion Kop, however you know it, are names The Patch has gone by over the years, but most birdwatchers and ringers will fondly remember the site for rare birds or experiences of bird migration. It is often the first place a Fife Birder gets to see a bird in the hand, often having been ringed by James. James's warmth, and his great aptitude for imparting knowledge, will be remembered by most, and his legacy of turning a rough stony bare patch of ground into one of the best migrant hotspots of the East Coast is testament to his great ability as a plantsman, but more than anything, to his dedication to birds and ornithology.

Tom Dougall & Alan Lauder

Hanging out to dry: Long-eared Owl in a West Lothian garden

On 16 December 2021 at 11:05 hrs, I looked out of the kitchen window whilst taking a tea break from working from home and saw this Long-eared Owl perching on the whirligig washing line. The house and garden face due west onto rough land; to the north, some 300 m, lies Foulshiels, a 28 hectare, 40 year old, mixed-wood reserve managed by the Woodland Trust on the site of a former coal bing at Stoneyburn, West Lothian.

I don't know how long the owl had been present, but it stayed for a further four minutes, providing sufficient time for me to grab a camera and take a number of photographs through the window. Well, that's now the four native owl species in, or flying over, the garden. I've seen Long-eared Owls in prominent positions (e.g. exposed branches, fence posts) before at Tailend Moss, West Lothian, but never in a domestic setting. However, I note the Hawk and Owl Trust (www.hawkandowltrust.org/about-birds-of-prey/long-eared-owl) states that recent continental arrivals can be found in gardens and on fences etc. There are no known records of Long-eared Owl at Foulshiels or within the immediate locality. Even though the owl didn't appear to be ringed or have jesses, I undertook an internet search of various web sites over the course of the following days to establish whether an owl had been lost in the vicinity and indeed contacted the Scottish Owl Centre at Polkemmet, some five miles away. Those searches drew a blank. Anyway, wherever the owl had come from, it certainly made for a pleasant diversion in a day otherwise dominated by incessant MS Teams meetings.

Plate 47. Long-eared Owl, Stoneyburn, Lothian, 16 December 2021.
© *Frazer Henderson*

Frazer Henderson,
Stoneyburn, West Lothian

The Arctic Skua passage at Blackness in autumn 2021

Blackness (NT055802) lies on the southern shore of the Inner Forth estuary, but unlike nearby Hound Point does not rank among Scotland's premier skua watching locations. On 5 September, however, I noted three Arctic Skuas there, and from then until 12 October I frequently watched from the same vantage point, adjacent to the east wall of Blackness Castle. Of 23 visits, 21 took place between 09:30 hrs and 12:15 hrs, with each visit usually lasting for about 2½ hours. Viewing conditions were generally favourable throughout the period, with winds predominantly from the south-west, not a direction usually associated with peak periods of skua passage.

Although 2021 is the first year in which all four skua species were recorded at Blackness, the figures for Pomarine, Great, and Long-tailed Skuas were unremarkable. For Arctic Skua, however, the number of bird days (103) far exceeded the number for all previous years combined (85) (Table 1). They show a more than nine-fold increase over the previous highest yearly total (11 in 2004, 2012). With the exception of one Great Skua, all birds were observed at sea-level. As has been observed further to the east, skuas often migrate at a considerable height, where they rise up and fly over the Forth bridges. The evidence here suggests that at least some quickly return to sea-level, perhaps attracted by the gulls and terns in Blackness Bay. Almost all the Arctic Skuas were seen trying to rob these species.

Table 1. Numbers of skuas recorded at Blackness 1979–2020 (as per Lothian and Upper Forth bird reports).

Year	Arctic	Pomarine	Great	Long-tailed
1979	1			
1980	3		1	
1983	3			
1984	4			
1994	7	2		
1995	2			
1996	9			
1998	1			
2000	4			
2001	1			
2002	4			
2004	11			
2005	1			
2006	1	1		
2007	1			
2009	1		1	
2010	1			
2011	5	1	2	
2012	11		8	3
2013			1	
2014	1			
2015	1	1		
2018	4			
2019	5	1		
2020	2			
Totals	**85**	**6**	**13**	**3**

Their presence confirms once again that skuas have no fear of passing over the Forth bridges, although there are now three to negotiate. Apart from a group of five Arctic Skuas which passed through together on 19 September, and a trio on 1 October, all birds were in pairs or singles. The highest daily count was 13 Arctic Skuas on 28 September. Among Arctic Skuas, juvenile and dark-phase birds predominated, with just 10% being pale-phase, unlike 30–40% noted in a study of skua passage at Hound Point between 1986 and 2005 (McInerny and Griffin, 2007).

Arctic Skua is the commonest skua seen in the Forth on migration, and 2021 was a good skua year: they were present during each of the 20 visits made between 5 September and 8 October. The level of increase over previously recorded numbers at Blackness is also explicable by the unlikelihood of anyone having carried out a similar exercise there before. Previous observations have been on an *ad hoc* basis.

The number of terns, particularly Sandwich Terns, spending the autumn in Blackness Bay also reached record proportions since I began counting them there in 1993. Maximum counts in 2021 were 447 in July, 311 in August, 205 in

Plate 48. The vantage point at Blackness, January 2015. © Allan Finlayson

September, and 47 in October. Terns are among the Arctic Skua's favourite targets, and I estimate that *c.* 90% of them harried terns. When tern numbers declined in October, they continued to harass the gulls.

Because the Arctic Skuas recorded here have been logged using bird days, the number of individual birds seen will be less than the total number of bird days shown, and it is impossible to know how many individuals stayed for more than one day. From my observations I estimated that at least 70% of the birds either passed through the site either without stopping at all, or they paused briefly to harry other birds before continuing their journey (the vast majority). It is of course also impossible to know where these birds were headed. Indeed, it has been suggested that the unusually large counts at Blackness may be partially attributable to a number of birds being lured down from their high-flying migration and then staying for several days to exploit this food source (Ian Andrews, pers. comm.).

Unsurprisingly, watching with this regularity revealed other examples of seabirds frequenting Blackness. Most notable was the passage of Gannets. In many years, numbers for the season struggle to reach double figures. In 2021, however, 529 bird days were recorded during the survey period alone. Similarly, Red-throated Divers, having never reached double figure counts in the past, clocked up an impressive 36 bird days. One Long-tailed Skua (25 September), one Black Tern (3 October), one Scaup and one Black-throated Diver (both 5 October) were notable migrants, as were 55 Barnacle Geese on 18 September and 8–12 Brent Geese on 26–28 September.

In conclusion: even allowing for 2021 being a good year for skua passage, there seems little doubt that these birds have been under-recorded at Blackness in the past. In future years, it would be instructive to compare again the situation at Blackness when a good, high-level passage was going on at Hound Point or Ferry Hills near North Queensferry (Table 2).

Table 2. Comparison of skua passage at three Inner Forth sites, 5 September–12 October 2021.

	Arctic	Pomarine	Great	Long-tailed	No. of visits	Observation time
Blackness	103	3	3	1	23	53.75 hours
Ferry Hills	71	3	22	3	21	60.00 hours
Hound Point	86	3	19	0	10	33.00 hours

Plate 49. Arctic Skua, Aberlady Bay, Lothian, 27 August 2021. © *Ian Andrews*

Further observation at Blackness might then reveal whether this interruption of migration at height to exploit a sea-level source of food is a regular pattern of Arctic Skua behaviour. For the moment, the question of where these birds go after leaving the Inner Forth must remain open.

Acknowledgements

I am grateful to Mervyn Griffin for providing data on the birds at Hound Point, and to Chris Pendlebury, recorder for the Upper Forth region, for information on skuas recorded at Blackness between 2017–2020.

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Allan M. Finlayson, Linlithgow.
Email: priory852@tiscali.co.uk

Tracking the Bean Geese of Central Scotland

The Taiga Bean Goose *Anser fabalis* is one of Scotland's rarest migratory birds, with only one small population, amounting to fewer than 300 birds, wintering on the Slamannan Plateau, near Falkirk in central Scotland. It remains one of the few declining goose species in Europe, with an estimated population of 100,000 in the mid-1990s, declining to 63,000 in 2009. It is on the IUCN Red List of Threatened species, breeding in Scandinavia and western Russia, and wintering mainly in southern Sweden, Denmark and, to a lesser extent, in northern Germany and Poland. Small numbers also winter in The Netherlands and Britain. The loss, fragmentation, and degradation of suitable habitat to forestry and infrastructural development are among the principal threats affecting this species. An international Action Plan provides details for the conservation of Taiga Bean Geese across its global range (Majakangs *et al.* 2015).

NatureScot (formerly Scottish Natural Heritage) designated it a Site of Special Scientific Interest in 2006 to safeguard the roost sites and foraging areas of the Slamannan Plateau Bean Goose population. A management scheme was introduced in 2006 to support beneficial land management for the species within the protected area.

The conservation of all migratory species, like Bean Geese, requires a good understanding of their habitat requirements throughout the annual cycle, including their breeding and wintering areas, as well as their migration routes, so that effective conservation measures can be implemented across their global range.

Previous work at Slamannan used traditional goose counts to understand the winter habitat selection of the Slamannan Bean Geese (Smith

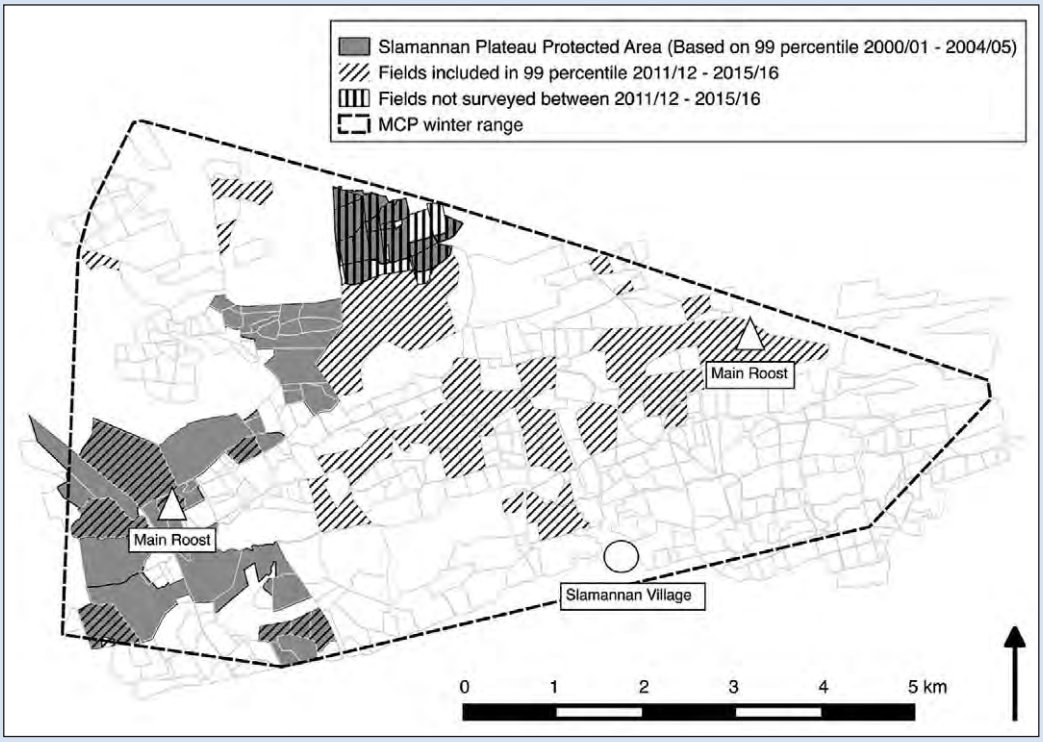

Figure 1. The majority of the Bean Goose population foraged within the Slamannan Plateau protected area (solid grey) when it was designated but had shifted to forage largely outside of the protected area ten years later (hatched area). The MCP represents the total recorded winter range of the Bean Geese on the Slamannan Plateau.

et al. 1995, Minshull *et al.* 2014). However, the advent of new technology, such as Global Positioning System (GPS) tags, has provided new opportunities to study the geese. A total of 12 birds were fitted with GPS tags between 2012 and 2015, and this has allowed us to track their migration routes and identify their breeding areas in central Sweden (Mitchell *et al.* 2016).

More recently, a research project carried out by NatureScot, the Wildfowl & Wetlands Trust, Bean Goose Action Group and Edinburgh Napier University aimed to better understand their wintering habitat requirements at the population and individual scales by combining goose count and GPS tag data. The goose count data showed how the population was using the wider landscape, while the GPS tags allowed the research team to identify specific fields individual geese were using. This project also wanted to understand how the population's current distribution matches with the protected area, designated ten years earlier.

Plate 50. Taiga Bean Goose, near Parkhead Farm, Slamannan, Clyde/Upper Forth, autumn 2020. © *Simon Rix*

Plate 51. Taiga Bean Geese, near Parkhead Farm, Slamannan, Clyde/Upper Forth, autumn 2020. © *Angus Maciver*

The results of this study revealed that the geese used a very small wintering area on the Slamannan Plateau, with individual ranges occupying less than 2 km². Over the five winters of the study between 2011/12 and 2015/16 the entire population used under 20% of the grassland fields available to them in the study area, and the tagged geese regularly used the same small number of fields each winter, possibly offering the safest and least disturbed foraging habitats. The study also found that the geese strongly selected improved pasture foraging habitats, these most likely providing them with highly nutritious grassland swards.

When the protected area was designated for the geese, most of the population roosted and foraged within its boundaries. However, this research has shown that their distribution has shifted to areas largely outside the protected area (Fig. 1). The management scheme was no longer directly supporting habitats now being used by the geese, and therefore the scheme was closed in 2018.

This work has highlighted the importance of on-going monitoring of priority bird species to ensure that conservation measures match their distribution and habitat requirements. For bird species using highly modified habitats, such as agricultural land, flexible species conservation measures should ideally track shifts in their distribution. This research has just been published in *Bird Study.*

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Mike Thornton, NatureScot

Bar-tailed Godwit predated by Carrion Crow

As high tide approached at midday on 14 December 2021, I observed a solitary Bar-tailed Godwit from the hide at the middle scrape at Levenhall, Musselburgh. A Carrion Crow seemed to be returning to the godwit at intervals, and I wondered why the wader did not attempt to fly off.

After a few minutes, the crow started to settle on the back of the wader and push it under the water as three or four other crows looked on from a couple of metres away. The godwit, which I assume was ailing, put up very little resistance and after a few more attempts the crow succeeded in drowning it. It then began to pluck the bird, starting with the back of the neck.

At this point I had to leave, so I didn't see how the episode concluded.

John Blair, Lasswade, Midlothian

Plate 52. Bar-tailed Godwit predation by Carrion Crow, Musselburgh, Lothian, 14 December 2021. © *John Blair*

BOOK REVIEWS

The book reviews published in *Scottish Birds* reflect the views of the named reviewers and not those of the SOC.

Gulls of Europe, North Africa and the Middle East: An Identification Guide

Peter Adriaens, Mars Muusse, Philippe J. Dubois & Frédéric Jiguet, 2022, Princeton University Press New Jersey, USA & Oxford, England, ISBN 9780691222837, paperback, 320 pages, *c.* 1400 colour photographs, 45 colour distribution maps, £30.

The enigma that is gull identification will be the reason why 'gullers' will immediately buy this book, and nearly 1400 quality colour photographs, combined with their helpful annotations, should be the reasons why *any* birder would wish to buy it.

This book covers 34 species and 10 sub-species found in the Western Palearctic: Thayer's Gull is treated as a separate species, but so-called Steppe and Heuglin's Gulls are not. However, each species/sub-species has at least six pages dedicated to their description, together with an abundance of photographic images to show the birds in their various plumages. Each species also has panels within its section where the species in question is depicted alongside images of similar taxa to give an instant comparison with confusion species. American Herring Gull has its own section of 10 pages, including at least six images for each of four plumage cycles. Of course, many gulls go through fewer cycles than Herring Gulls, so their sections are smaller. Each gull is given a paragraph describing its range and a distribution map for those breeding within the Western Palearctic. There are also 14 pages of images and text dedicated to the more commonly found hybrid gulls.

One section not to be ignored is the 20-page Introduction which lays bare the intricacies of the moult and aging of gulls, but in such a simple and comprehendible way that it is impossible not to glean valuable information even on the first read through.

At the very least this book will give some readers more confidence in identifying adult-plumaged gulls, and thanks to the easily understood text and the plethora of images, readers may then wish to delve into the mysteries of identifying gulls in their earlier plumages. I will leave the last words of 'encouragement' with the authors who state, 'Rest assured that nobody in the world can correctly identify each and every gull that they come across'. Enjoy!

Brian Robertson

Feathers: An Identification Guide to the Feathers of Western European Birds

Cloé Williams, 2021. Helm, ISBN 978-1-4729-7172-2, hardback, 400 pages, colour photos, colour and b/w illustrations, £55.

This large format book was first published in France in 2017 and is now translated into English by Tony Williams. The sheer volume of research taken to complete it is truly prodigious, making its production quite remarkable. Following a short introduction, there are eight main chapters covering all aspects of feather identification, from determining the location of feathers on a bird, flight and tail feather shapes and adaptions, and the problems of body feather identification.

It is amply provided with tables and helpful keys to aid identification and is richly illustrated with superb full-page colour pictures of feathers for each species. For the novice, there is an exercise to identify feathers of some fifty common species from different habitats as well as an appendix with 14 pages of the most detailed biometric data. Armed with this book, the reader should with a bit of practice be able to identify accurately any of the 400+ species found in Western Europe.

There have been similar attempts in recent years to provide feather identification guides, but this book surpasses them all in its scope, detail, and illustrations. Highly recommended.

David Clugston

Europe's Birds. An Identification Guide

Rob Hume, Robert Still, Andy Swash & Hugh Harrop, 2021, WildGuides, ISBN 978-0-691-17765-6, Flexibound, 640 pages, 4700 colour photos, 540 colour distribution maps, 49 illustrations, £19.99.

New bird guides covering Europe will always be judged against the Collins Guide. Most don't withstand such comparisons, but in fact this one stands up very

well. Aesthetically, it's not quite for me. The maps are hard to read, I prefer illustrations, and it feels cluttered with text and images. However, I was very impressed by the amount of information this book conveys.

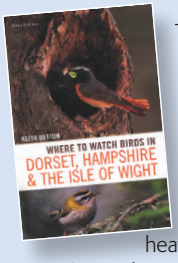
The bulk of it comprises plates featuring photos accompanied by captions highlighting useful identification features. These are well supported by diagrams (e.g. wheatear tails), composites of similar species (e.g. skuas) and tables explaining identification minutiae (e.g. treecreepers). Between these various means of portraying features, it has more detail than Collins and feels more up to date. Taxonomically it is up to date (if not ahead of its time - split Siberian Chiffchaff and potentially split races of Dunnock, for example).

There are niggles - some regular vagrants get relegated to the back of the book (e.g. Pallas's Warbler) while rarer species (e.g. 'Eastern' Red-rumped Swallow) feature in the main part. North African species are absent, and I would advise caution in places (e.g. 'borealis' Eider), but these are niggles rather than big issues. It is a good book, and should prove very useful when travelling within Europe.

Mark Lewis

Where to Watch Birds in Dorset, Hampshire & the Isle of Wight

Keith Betton, 2021, Helm, London, ISBN 978-1-4729-8540-8 (5th edition), 382 pages, 44 b/w illustrations, 60 b/w maps, paperback, £19.99.



The region covered by this book provides some of the best birdwatching in southern England. The coastline varies from auk-bearing sea cliffs to salt marshes and headlands, notably Portland Bill, which attract rare migrants. Inland sites include the best remaining heathland in the UK, a stronghold for species such as Dartford Warbler.

Each site description begins with habitat, followed by a detailed discussion of species. There is then a short paragraph on the best time to visit, usually relating to conditions such as tide level or time of day, followed by a description of access and facilities such as car parking, accompanied by clear maps. Finally, there is a boxed 'calendar' section which summarises the main bird species to be seen at each time of year.

The description of species for each site is extremely detailed, although rather too much text is devoted to rarities which sometimes makes it difficult to focus on the species that a visiting birder may expect to see.

Descriptions of access are very well done, clearly by an author who knows the site well. Inevitably, these assume a car-based visit, although for the Isle of Wight access to some sites by public transport is usefully included given the eye-watering cost of taking a car on the ferry.

Despite minor criticisms, the book is well done and essential for anyone visiting this bird-rich area of southern England.

Jeremy Brock

New Books also received in the George Waterston Library

The Birds are our Friends. Yessengali Raushanov, 2021. Whittles Publishing, Caithness, Scotland, ISBN 978-1-84995-455-6, paperback, 256 pages, £18.99.

The George Waterston Library is open for browsing and borrowing during Waterston House opening hours (check SOC website). Books can either be borrowed directly or can be posted out (UK only, conditions and p&p charges apply) by emailing the Librarian (Library@the-soc.org.uk).

RINGERS' ROUNDUP

Thank you very much to the many ringers, ringing groups, birders and the British Trust for Ornithology (BTO) who provided the information for this latest round up. Thanks also to the many bird watchers who take the time and trouble to read rings in the field or find dead ringed birds and report them.

If you have any interesting ringing recoveries, articles, wee stories, project updates or requests for information which you would like to be included in the next issue, please email to Raymond Duncan at rduncan393@outlook.com

For lots more exciting facts, figures, numbers and movements log on to www.bto.org/volunteer-surveys/ringing/publications/online-ringing-reports

Chk = chick, Juv = juvenile, Im = Immature, Ad = adult, m = male, f =female. Sghtd = ring(s) read in field, Rtpd = retrapped, n = nesting, x = dead

Reedbeds

Reedbeds are a fairly unusual and specialised habitat found in marshy areas and the edges of water bodies around Scotland. Similarly, some of the birds found in them are also unusual and specific to this habitat. The only way to really gain any sort of idea of the numbers of birds using reedbeds and their importance for breeding, passage, roosting and overwintering is by regular ringing.

Tay Reedbeds 2019–2021
- Steve Moyes, Tay Ringing Group

The majority of bird species in the Tay reedbeds appear to have had a successful breeding season in 2021.

A direct comparison between years is difficult as the numbers of visits can vary, depending on a variety of factors such as weather and tide height. I have looked at four of the most common species we catch, two are mainly resident and the other two are migratory.

2020 was a difficult year partly due to the lockdown from March to June, but also because of the huge fire that burned over so much of the reeds on 27 April. Two of our ringing sites lost virtually all of their standing reed, so very few birds were able to breed in those areas until later in the season.

In the following table 'new', refers to new birds ringed and 'retrap' are birds that have been ringed previously and recaptured at a later date. Some birds will be retrapped more than once in any year and this is particularly true of Bearded Tits.

Bearded Tits suffered badly in 2020 as many of the first broods were destroyed in the fire. In most years some pairs manage a third brood but there was little evidence of this in 2020, possibly due to unfavourable weather. Clearly conditions in 2021 suited them as this is the highest number of new birds ringed since 2014, which was our record year. The year 2014 was also when many birds irrupted to other Scottish reedbeds, although no pre-irruptive behaviour was observed in 2021. One ringing session in November was extremely successful with 161 'Beardies' being caught at one site. This was our best catch ever.

Reed Bunting numbers were fairly consistent over the period, with the majority of the birds caught in the October to December period, suggesting many may have moved there from other parts of Scotland.

Table 1. Tay Reedbed Ringing totals 2019–2021

	2019		2020		2021	
	New	Retrap	New	Retrap	New	Retrap
Bearded Tit	258	96	214	122	608	309
Reed Bunting	482	13	518	30	516	34
Reed Warbler	100	15	127	11	196	30
Sedge Warbler	498	33	765	36	1,010	50

Reed Warblers continued their spectacular increase over the period. In 1985 Tay Ringing Group ringed six Reed Warblers which was a group record at the time. Since they expanded their breeding range northwards, numbers continue to increase, with 2021 being our best year by far.

Sedge Warblers appeared to have an excellent year in 2021, and the catch was the highest for a number of years. An infestation of aphids in some areas of the reeds undoubtedly concentrated the birds and increased the numbers caught. The majority of the birds caught on the Tay are probably not locally hatched but come there to feed up from other parts of Scotland.

Graemeshall Reedbed, Orkney 2021 - Colin Corse, Orkney Ringing Group

We managed a total of 14 visits from 22 July–16 September. The number of visits is less than in previous years as due to wet and windy weather in September we had to take the nets down earlier than normal. We also missed two planned sessions due to lack of ringers being available. One of the main reasons for operating this site is that it is probably the only site in Orkney where Trainees & C Permit holders get the opportunity to do regular mist netting and handle good numbers of birds and gain experience which is necessary for them to progress to C and A Permits respectively.

Swallow numbers were lower, 1196 this year as opposed to 1592 in 2020. **Sand Martin** numbers continue to increase. From 2000–2015 a total of 29 Sand Martin were ringed. 2016 was the first time we ringed more than single figures of birds with 51 being ringed. This year we passed 200 birds being ringed. Breeding numbers are increasing.

2021 was also an exceptionally good year for **Pied Wagtails** with 156 birds being ringed. The average since 200 is only 29. **Sedge Warbler** numbers were very near the average since 2000 with 93 birds ringed this year and the average being 92.

When comparing annual totals the timing of ringing visits can influence the totals e.g. Sand Martins are caught early in the season whereas Pied Wagtails are caught mainly in September. Ideally you would like ringing sessions regularly spaced (say two per week) throughout the catching season but unfortunately ringer availability and weather conditions do not allow this.

Table 2. Graemeshall Reedbed totals 2021

	FG	P	R/R	Total
Sand Martin	209	0	0	209
Swallow	1,186	0	10	1,196
Pied/White Wagtail	156	0	1	157
Wren	6	0	1	7
Sedge Warbler	93	0	7	100
Reed Warbler	1	0	0	1
Starling	13	0	0	13
House Sparrow	1	0	0	1
Linnet	1	0	0	1
Redpoll (Common/Lesser)	1	0	0	1
Reed Bunting	16	0	1	17
TOTAL	**1,683**	**0**	**20**	**1,703**

FG = Full-grown, **P** = Pulli, **R/R** = Recoveries & retraps

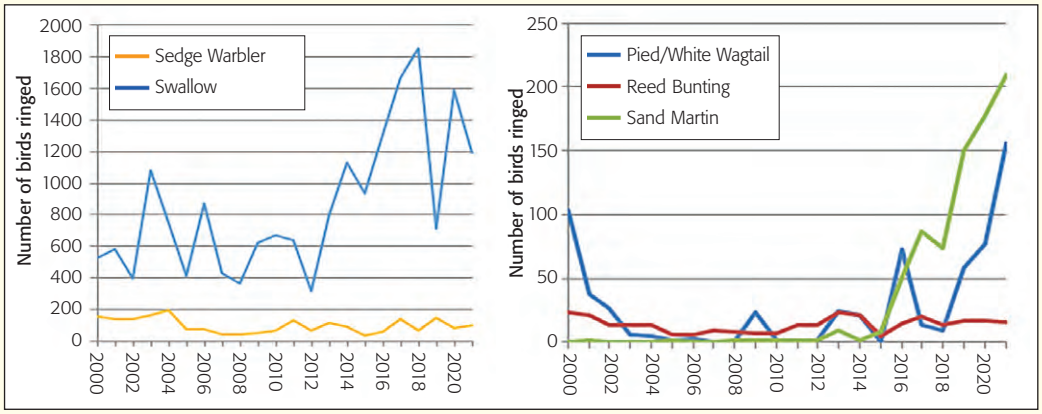


Figure 1. Graemeshall Ringing totals 2000–2021

Logie Buchan Reedbed, Ythan Estuary, North-East Scotland, autumn 2021
- Raymond Duncan, Grampian Ringing Group

Logie Buchan reedbed at the head of the Ythan Estuary, North-East Scotland has been a ringing site of Grampian RG since the 1980s. It's the biggest of three reedbeds along the Ythan Estuary, flanking either side of the river at Logie Buchan Bridge for about 150 m and about 40 m at its widest. This is not particularly large with the usual fare of Sedge Warblers and Reed Buntings and roosting Swallows, Sand Martins and Pied Wagtails. Reed Warblers seem restricted to the odd autumnal passage bird while Tay RG did once very kindly share some of their Bearded Tits in 2014 when a memorable autumn irruption saw up to nine birds in the Logie Buchan reedbed during November and a pair remained to breed successfully in 2015 before they all disappeared.

Sedge Warbler turnover in the Logie Buchan reedbed was looked at in a bit more detail in late summer/autumn 2021 with regular standard mist netting sessions and as many evening then following morning sessions as the weather and ringers' fatigue would allow (which turned out to be 13).

397 different Sedge Warblers were caught in these 26 ringing sessions between 20 July and 21 September. 66 were retrapped again, 22 of them the following day after ringing, the other 44 spread out with the longest staying bird retrapped 13 days later. This is just a sample proportion of what passes through here demonstrating just how valuable a habitat reedbeds are.

Sedge Warbler autumn UK movements

AET9538	Juv	30/07/21	Logie Buchan, N-E Scotland
	Rtpd	11/08/21	Kinneil Lagoon, Upper Forth
			179 km SW, 12 days
AEH8917	Juv	30/07/21	Graemeshall Loch, Orkney
(cat)	X	13/08/21	Marsden, West Yorkshire
			590 km S, 14 days
AHR3939	Chk	03/07/21	Newburgh, N-E Scotland
	X	24/08/21	Trimley Marsh NR, Suffolk
			629 km SSE, 52 days
AHR4631	Juv	24/08/21	Kingston, Moray & Nairn
(cat)	X	05/09/21	Fleet, Dumfries & Galloway
			317 km SSW, 12 days

The whole Sedge Warbler southward migration through the UK and France/Spain seems to comprise of waves of birds haphazardly picking their way down the country with a wide range of recovery locations. It certainly doesn't seem to involve as much reedbed to reedbed hopping as might be expected. Despite a few thousand ringed at Logie Buchan over the years and even more thousands ringed in the Tay reedbeds 120 km south, we have only exchanged two birds!

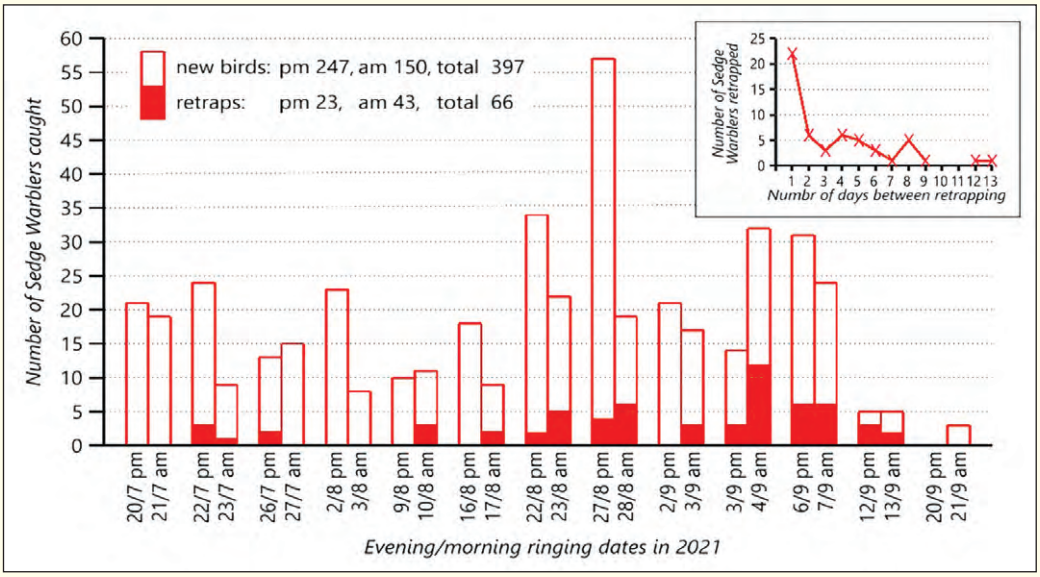


Figure 2. Sedge Warbler turnover in Logie Buchan Reedbed, autumn 2021.

Kinneil Lagoons, Falkirk
- Ian Livingstone, Clyde Ringing Group

In 2018, CRG members were asked to start a ringing project at this site and since April of that year we have made increasing numbers of visits annually.

The area consists of tidal lagoons which hold large numbers of migrant waders, an extensive reed bed and on the Kerse, a large area extending to the east, which is now a closed landfill site. It is this area which is covered in naturally regenerating woodland with patches of phragmities which makes up our main ringing area.

The site holds large numbers of breeding warblers, mainly Whitethroat, Sedge Warbler, Chiffchaff and Grasshopper Warblers with smaller numbers of Willow Warbler and Blackcap.

In 2021, we made a sustained effort to include the edge of the reed bed in the netted area and what a decision that was!

The main migration period of late July to the end of September produced large numbers of migrants as usual and resulted in a year total of 1,418 warblers ringed; Sedge Warbler 379, Willow Warbler 361, Whitethroat 277, Chiffchaff 200, Blackcap 171, Garden Warbler 12, Grasshopper Warbler 9, Reed Warbler 8 and Lesser Whitethroat 1. We also had one control, a juvenile Sedge Warbler ringed at Kirkton of Logie Buchan, Aberdeenshire on 30 July 2021 and re caught at Kinneil on 11 August 2021 178 km in 12 days. This is the very first juvenile controlled from further north in the same year the CRG has ever had. Most appear to make much longer movements out of Scotland when they migrate.

The reed bed also turned up a pair of Bearded Tits, the first we have seen, and we caught the adult male, although there was no indication that the birds produced any young.

With this many ringed we had hoped for some interesting onward recoveries having had 2 Sedge Warblers and 1 Whitethroat caught in the west of France last autumn and so far we have just had a single Sedge Warbler caught at Icklesham in Sussex, 636 km S, on 1 August 2021, 9 days after leaving Kinneil.

With this many birds passing through the site we were cautiously optimistic that we might catch something unusual but October came and went without any goodies. However, a trip for winter thrushes on the 13 November produced the best birds of the year in the form of a Cetti's Warbler and then 20 minutes later a Siberian Chiffchaff in the same net!

The Cetti's is only the second ringed in Scotland and only the 4th record for the country. The Siberian Chiffchaff was almost a CRG first but the Southall brothers on Arran got one earlier that morning!

Plate 53. Cetti's Warbler, Kinneil Lagoons, Upper Forth, 13 November 2021. © *Kevin Sinclair*

Plate 54. Siberian Chiffchaff, Kinneil Lagoons, Upper Forth, 13 November 2021. © *Kevin Sinclair*

Anstruther Harbour colour-ring Rock Pipit roost study

In November and early December 2021, late afternoon walks along the West harbour wall at Anstruther indicated that a Rock Pipit communal roost was established in creels stacked for the winter on the quayside. As birds were coming in well after sunset, and many of them went straight into the roost, whilst others moved around on top of the creels and along the quay side, it was difficult to be clear on the number of birds using the roost, though estimates varied between 15 and 30, with a suspicion that the higher figure was probably itself on the low side.

The positioning of the creels suggested that there was potential for establishing a ringing site based on use of mist nets, potter traps and spring traps. It was apparent that the number of birds using the harbour during the bulk of the daylight hours was limited, perhaps no more than four. The germ of an idea for a colour ring project, based on walking the shores to East and West of Anstruther to discover where roosting birds spent the daylight hours, was established. Permissions were sought from the Harbour Master to work the harbour and from BTO to register a colour ring project. The first two birds were trapped using Derek Robertsons' loaned traps on 13 December, and by the end of the year a total of 15 birds had been ringed, four with colour rings which arrived from the supplier on Christmas Eve.

Thus far birds with metal rings on the right leg have been seen on the shore up to 1.5 km East and West of Anstruther, and two of the colour ringed birds have been seen in the harbour. My colour sequence consists of a single yellow ring with two black letters on the left leg, and the metal on the right leg. On 28 December, a yellow colour ringed bird was seen in flight at Kilrenny Mill, East of Cellardyke, 1.5 km from the harbour roost site. A bird was seen again here on 30 December, and when photographed it was noted that the yellow ring was on the right leg and contained a three letter black alpha code. So not mine! It was established within the hour that this bird was ringed at Maletangen Ornithological Station, More and Romsdal, Norway as a juvenile female on 7 July 2021, some 950 km NE. Not a bad start to my project! (Kilrenny Mill is proving quite a hot spot for Norwegian colour ringed rock pipits, with Jared Wilson having read three other ring sequences in the last 18 months; and Amanda Biggins from Grampian RG has had others in their area, from their study over the past decade).

The new year is already off to a good start and on 3 January nine birds were caught at the roost, including a new Norwegian bird colour ringed Orange ESS on right, metal ring on left leg (from same area as the bird reported above), and two British-ringed birds thought to come from the Isle of May (about 7 km to SE), and two retraps from the roost.

Essentially my project is about finding how far from the communal roost birds will travel to establish their day time feeding areas, whether these are fixed, and whether they return to the same roost. Come the spring, the study will extend to identify breeding territories, ring pulli, and follow-up at the roost in subsequent winters. Whilst ringing has initially been confined to the roost, it is intended to start using spring traps at the day time sites from early January 2022.

Ringers and birders are requested to keep an eye out in the East Neuk of Fife for yellow colour rings with two black letters on the left and metal on the right (it is hoped that a dark blue above the metal will be added shortly this indicating the bird ringed at as opposed to caught away from the roost). Note of any bird carrying a metal only in the area will also be of interest, and effort will be made to retrap, but with good numbers ringed annually on the Isle of May it can't be assumed that such will necessarily be from my project. From now on metal only birds from my project will be pulli, as the BTO doesn't permit use of colour rings until birds have fledged.

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East coast auk wreck - late summer 2021

Unfortunately, after another good breeding season in 2021, Guillemots and Razorbills seem to have encountered major problems post

breeding along the east coast of Scotland. And just as the Guillemot and Razorbill mortality abated Puffin mortality then seemed to increase.

During August large numbers of Guillemots and Razorbills were observed close inshore along the east coast of Scotland and starting to move into rivers. On the River Ythan, north of Aberdeen, birds were up to 5 km up river almost as far as Ellon during September. Rab Rae commented on a lifer after 40 years of birding on the Ythan with a Razorbill above Waterside Bridge for the first time ever! Bizarre sights such as an adult feeding a youngster 1 km up the river were also accompanied by regular Great Black-backed Gull predation on the ever weakening birds. On a 2 km stretch of beach between the Ythan mouth and Drums, Laurie Van Der Heijdt collected 253 dead auks (186 Guillemot, 37 Razorbill, 1 Puffin and 29 unidentified) in less than a month between early September and early October. During a similar period just a few kilometers further up the coast Doug Grant estimated over 600 dead Guillemots on beaches between Cruden Bay and Fraserburgh with a shocking 170 on a single small beach at Boddam.

Further south, a Twitter post by Tom Finch on 11 September 2021 reported a 'totally surreal encounter with 18 guillemots on a short section of the River Teith - calling, standing around on the banks and sometimes flying. Local Dippers confused.' It should be pointed out that this is on an inland tributary of the River Forth 3 km west of Stirling and the M9!

Toxic algal blooms at sea have been mooted as one possible cause of this large scale mortality but nothing definite has been ascertained so far.

Dead ringed birds amongst the casualties have involved a wide range of ages and colonies.

Guillemot

R14790	Ad	24/06/00	Sule Skerry, Orkney
	x	10/12/21	Cruden Bay, N-E Scotland
			239 km SE, 7,839 days
R29432	Chk	19/06/21	Castlecraig, Highland
	x	08/09/21	Blyth, Northumberland
			327 km SSE, 81 days
Y14296	Chk	19/06/21	Castlecraig, Highland
	x	03/09/21	Fraserburgh, N-E Scotland
			119 km E, 76 days
T23861	Ad	03/07/05	Whinnyfold, N-E Scotland
	x	30/09/21	Cruden Bay, N-E Scotland
			3 km NNE, 5,933 days
N10287	Chk	26/06/20	Isle of May
	x	18/9/21	Sunderland, Tyne & Wear
			327 km SSE, 81 days
N10022	Chk	25/06/21	Isle of May
	x	01/09/21	Lunan Bay, Angus & Dundee
			51 km N, 68 days
N10216	Chk	26/06/21	Isle of May
	x	10/10/21	North Berwick, Borders
			21 km SW, 106 days
N10185	Chk	25/6/21	Isle of May
	x	10/10/21	Norfolk 459 km SE, 106 days
N08326	Chk	27/6/19	Isle of May
	x	28/7/21	Cambo Sands, Fife
			14 km NNW, 762 days
N10065	Chk	25/06/21	Isle of May
	x	13/10/21	Norfolk 474 km SE, 110 days

Information is still awaited for a Helgoland ringed Guillemot found dead by Doug Grant.

Plate 55. The sombre sight of 150 dead Guillemots at Boddam, North-East Scotland, 2 October 2021. © *Doug Grant*

Razorbill

K22390	Chk	28/06/10	Shiants, Outer Hebrides
	x	19/09/21	Filey Brigg, North Yorkshire
			558 km SE, 4,101 days
K23222	Chk	27/06/11	Shiants, Outer Hebrides
	x	18/09/21	Cocklawburn, Northumberland 360 km SE, 3,736 days
K34663	Chk	05/07/15	Shiants, Outer Hebrides
	x	13/09/21	Ythan Estuary, N-E Scotland
			268 km ESE, 2,262 days
M99967	Ad	27/06/21	Isle of Canna, Highland
	x	19/09/21	Blyth, Northumberland
			381 km SE, 84 days

Interesting all the dead ringed Razorbills were ringed on the west coast.

Puffin

EW44578	Ad	03/07/07	Isle of May
	x	28/11/21	Redcar, Cleveland
			198 km SSE, 5,262 days
EZ57877	Ad	13/07/20	Isle of May
	x	28/11/21	Ross Black Sands, Northumberland 143 km SE, 503 days
EZ56735	Chk	12/08/18	Isle of May
	x	16/12/21	Arbroath, Angus & Dundee
			354 km N, 1,222 days

Plate 56. Darvic-ringed (N59) Kestrel, Rattray Head, North-East Scotland, 10 September 2021. © *Alex Jamieson*

EG53546	Ad	07/06/03	Isle of May
	x	16/12/21	Flotta, Orkney
			293 km N, 6,767 days
EZ15779	Ad	27/06/19	Isle of May
	x	15/12/21	South Ronaldsay, Orkney
			292 km N, 902 days
EZ57538	Chk	06/07/20	Isle of May
	x	09/12/21	Newburgh, N-E Scotland
			129 km NNE, 521 days
EW16008	Ad	07/07/06	Isle of May
	X	21/11/21	St Ninian's Isle, Shetland
			427 km N, 5,616 days

A selection of interesting movements

Coot

GN35505	Ad	19/06/19	North Ronaldsay, Orkney
	Sghtd	05/11/20	St James Park, London
(seen up to 30/12/20)			886 km S, 505 days

Looks like an Orkney breeding bird wintering in one of the Central London parks - remarkable!

Glaucous Gull

2065051	Chk	28/07/20	Kapp Kolthoff, Svalbard
	Sghtd	15/01/21	Sandwick, Orkney
			2,200 km SW, 171 days

Great Black-backed Gull

3007673	Chk	13/07/20	Hjelmsoya, Masoy, Norway
	x	05/06/21	Portmahomack, Highland
			1,991 km SW, 327 days
3047673	Chk	28/06/20	Skomvaer Rost, Norway
	x	08/01/21	North Ronaldsay, Orkney
			1,140 km SW, 194 days

Great Skua

MA22890	Chk	20/07/10	Handa, Highland
	x	09/03/21	Castlevetrano, Sicilia, Italy
			2,658 km SE, 3,885 days

Greenfinch

TH96211	Juv	21/08/06	Carse of Ardersier, Highland
	Rtpd	02/05/11	Little Massingham, Norfolk
			610 km SSE, 5,368 days

At over 14½ years old this is the oldest Greenfinch on BTO records.

Kestrel

EA71998	Chk	17/06/21	Lledrod, mid-Wales
	Sghtd	11/09/21	Rattray Head, N-E Scotland
			605 km NNE, 86 days

A great 'capture' on camera by Alex Jamieson and a very interesting if rather unusual record of a Welsh ringed chick post fledged to North-East Scotland (the very outer tip of)! Alex was able to read the black engraving N59 on the yellow colour ring from his photographs.

Lesser Redpoll

AFN8604	Juv	17/09/20	Avoch, Highland
	Rtpd	06/01/21	Zandvoort, Netherlands
			804 km SE, 111 days
AFN8523	Juv	06/09/20	Avoch, Highland
	Rtpd	18/10/20	Bambois, Belgium
			987 km SSE, 42 days
AJB4740	Ad	10/09/19	Avoch, Highland
	Rtpd	19/12/20	Mirwart, Belgium
			1,040 km SSE, 466 days
AYJ4756	Juv	08/07/20	Melvich, Highland
	Rtpd	17/11/20	Asten, Netherlands
			1,012 km SSE, 132 days
ACA9376	Ad	26/10/19	near Whim, Lothian
	Rtpd	14/03/21	Hockai, Liege, Belgium
			849 km SSE, 505 days
AEJ0982	Juv	16/07/20	near Whim, Lothian
	Rtpd	15/03/21	Chevron, Liege, Belgium
			845 km SE, 242 days
AEJ0982	Imm	01/10/20	near Whim, Lothian
	Rtpd	15/10/20	Staden, Belgium
			674 km SSE, 14 days

There was a large and rapid (e.g. AEJ0982) departure of Lesser Redpolls from Scotland in autumn 2020 which resulted in many ringing returns throughout England. Those shown here are of birds which carried on further south across the Channel onto the continent. See also Siskin.

Linnet

Z972608	Ad	28/12/18	Fort Belan, Gwynedd, Wales
	Rtpd	05/10/21	Stronsay, Orkney
			676 km NE, 1,012 days

Following the last Ringers' Roundup feature on northern Linnets which included five ringing movements of Northern Isles birds wintering in NW England here's another interesting one wintering even further south into Wales.

Long-eared Owl

GC81568	Ad	20/10/17	North Ronaldsay, Orkney
	Rtpd	12/10/21	Ocklebo, Sweden
			1,076 km NE, 1,453 days

Long-tailed Tit

BLT570	Juv	26/06/20	Cupar Muir, Fife
	Rtpd	30/03/21	Peebles, Borders
			75 km S, 277 days
BLT571	Juv	26/06/20	Cupar Muir, Fife
	Rtpd	29/09/21	Peebles, Borders (& 23/11/21)
			75 km S, 460 days

Manx Shearwater

EL58932	Chk	01/09/05	Hallival, Rum, Highland
	x	12/10/20	Santa Catarina, Brazil
			10,082 km SSW, 5,520 days
ES73451	Chk	04/09/04	Hallival, Rum, Highland
	x	21/10/20	Buenos Aires, Argentina
			11,555 km SSW, 5,891 days
EY35041	Ad	08/09/12	Hallival, Rum, Highland
	x	24/10/20	Santa Catarina, Brazil
			10,205 km SSW, 2,968 days

Oystercatcher

FH70039	Chk	17/06/19	Aberdeen, N-E Scotland
(T69)	Sghtd	24/09/21	Portobello, Lothian
			146 km SSW, 830days
FH70049	Chk	17/06/19	Aberdeen, N-E Scotland
(T79)	Sghtd	24/11/19	New Brighton, Merseyside
			424 km SSW, 160 days
	Sghtd	19/09/21	Seaforth NR, Merseyside
(& 07/11/21)			420 km SW, 825 days

Interesting records of two siblings from the same brood wintering on different sides of the country.

Plate 57. Darvic-ringed (T69) Oystercatcher, Portobello, Lothian, 24 September 2021. © *Marta Franco*

Peregrine

GN69183	Chk	28/05/06	Daviot Quarry, Highland
	Sghtd	26/04/21	Moffat, Dumfries & Galloway
			222 km SW, 5,447 days

An interesting movement of a Highland ringed chick breeding in Dumfries & Galloway. This bird was identified by transponder.

Pied/White Wagtail

AHR4508	Juv	19/08/21	Kingston, Moray & Nairn
	Rtpd	12/10/21	Mere STW, Wiltshire
			736 km S, 54 days
AFF0680	Juv	24/07/19	Kingston, Moray & Nairn
	x	20/02/21	Orre, Klepp, Norway
(in greenhouse)			518 km ENE, 577 days

An interesting recovery in Norway suggesting some of our reedbed roosters are Scandinavian.

Redwing

RY33992	Ad	07/10/20	Avoch, Highland
	x	05/01/21	Torres Novas, Portugal
			2,064 km SSW, 90 days

Sandwich Tern

DE24566	Chk	11/06/09	Forvie, N-E Scotland
	Sghtd	05/01/21	Killyleagh, N. Ireland
			397 km SW, 4,226 days

A very notable sighting of a Forvie bird in this small but increasing group of birds over-wintering in Northern Ireland.

Shag

1485921	Ad	06/07/21	Shiants, Outer Hebrides
(rACAP)	Sghtd	14/11/21	Buchanhaven, N-E Scotland
(present at Christmas)			276 km E, 131 days
1701303	Chk	05/07/21	Shiants, Outer Hebrides
(rACCL)	x	30/12/21	Lossiemouth, Moray & Nairn
			230 km E, 178 days

These are the first ever ringing movements of Shiants (west coast) Shags to the east coast. Ringing has been carried out there since the 1970s and more than 1,200 Shags have been colour-ringed since 2010. The photo by Tim Morley shows Shiants bird rACAP standing next to rXBR at the Buchanhaven roost near Peterhead. The interesting vagaries of bird movements are illustrated here with rACAP having made a journey from the west to east coast around the top of Scotland (presumably?) while rXBR was ringed as a chick at the Bullers o' Buchan in 2015 and has never ventured further than Peterhead, 10 km to the north, not even across the Ugie to the Scotstown roost!

Plate 58. Two red Darvic-ringed Shags, Buchanhaven, Peterhead, North-East Scotland, 13 January 2022. *© Tim Morley*

Siskin

ABF8771	Ad	22/06/20	Fortrose, Highland
	Rtpd	07/10/20	Col de Bretolet, Switzerland
			1,474 km SE, 107 days
ACA7714	Ad	22/06/19	Peebles, Borders
	Rtpd	22/03/21	Luxembourg, Belgium
			838 km SE, 639 days
AEJ1429	Juv	07/08/20	Peebles, Borders
	Rtpd	17/12/20	Limburg, Belgium
			788 km SE, 132 days
ATH4936	Juv	03/07/20	Peebles, Borders
	Rtpd	10/04/21	Obbola, Sweden
			1,585 km ENE, 281 days
AJE1204	Juv	19/07/20	Peebles, Borders
	x	02/07/21	Sor-Aurdal, Norway
			929 km NE, 348 days
17012955	Ad	28/03/21	Wibrin, Belgium.
	Rtpd	08/05/21	Inchberry, Moray & Nairn
			1,007 km NW, 41 days
16875808	Juv	23/03/21	Hockai, Liege, Belgium
	Rtpd	10/05/21	Banchory, N-E Scotland
			918 km NW, 48 days
16949425	Ad	21/03/21	Sourbrodt, Liege, Belgium
	Rtpd	23/05/21	Ballater, N-E Scotland
			946 km NW, 63 days

Like Lesser Redpolls, there was a large departure of Siskins from Scotland in autumn 2020 which resulted in many ringing returns throughout England. Those shown here are of birds which carried on further south across the Channel onto the continent. Note ABF8771 in Switzerland and ATH4936 and AJE1204, two Scandinavian juveniles already in the Scottish Borders in July.

Teal

EA18601	Juv	27/08/19	Ythan Estuary, N-E Scotland
	x	12/05/21	Konstantinovka, Russia
			3,096 km ENE, 624 days

Woodcock

ST081279	Ad	16/06/18	Pohjois-Pohjanmaa, Finland
	Shot	01/01/20	Dores, Highland
			1,783 km SW, 564 days
S414951	Ad	11/09/18	Pohjois-Karjala, Finland
	Rtpd	04/02/21	Newfield, Tain, Highland
			1,924 km SW, 877 days
EY73827	Ad	15/12/20	Ospisdale, Highland
	Shot	25/04/21	Opochetskiy District, Russia
			1,987 km W, 131 days
EY73971	juv	18/12/20	Heathmount, Tain, Highland
	Shot	19/04/21	Kirishkiy District, Russia
			2,060 km W, 122 days

SBRC position on Scottish Crossbill

M. LEWIS & C.J. MCINERNY

Since 2012, the Scottish Birds Records Committee (SBRC) has assessed records of Scottish Crossbill from Scottish regions that do not hold part of this species' core breeding range (ap Rheinallt *et al.* 2011). Acceptance was reliant on provision of recordings or sonograms of a 'type C' excitement call, which was considered to be unique to Scottish Crossbill (Summers *et al.* 2007, Summers 2020), with the SBRC acceptance criteria published on the SOC website: https://www.the-soc.org.uk/content/ bird-recording/sbrc/identification-of-scottish-and-parrot-crossbills

However, recent research has shown that identification based on the 'type C' call can no longer be regarded as a reliable way to separate Scottish Crossbill from Common Crossbill.

Analysis published by Martin *et al.* (2019), which classified calls of European Crossbill species into over 20 different call types, suggests that the 'type C' call can no longer be considered to be unique to Scottish Crossbill. During extensive recording sessions in the core range of Scottish Crossbill between 2014 and 2016, no recordings of 'type C' excitement calls were obtained from Scotland. However, extremely similar calls were widespread, if uncommon, across mainland Europe (called 'N2' under the recent classification) (Figure 1). Other calls ('N15') were also considered very similar to excitement call 'type C' and although again uncommon, were recorded from various parts of the UK and northwestern Europe.

However, the same study discovered a new call type that was apparently almost exclusively recorded in Scotland (classified as 'N20'), which is clearly different to the 'type C' excitement call (Figure 2).

It is possible that the 'N20' call refers to Scottish Crossbill for several reasons. First, the geographical spread of recordings is similar to the known range of Scottish Crossbill (Martin *et al.* 2019).

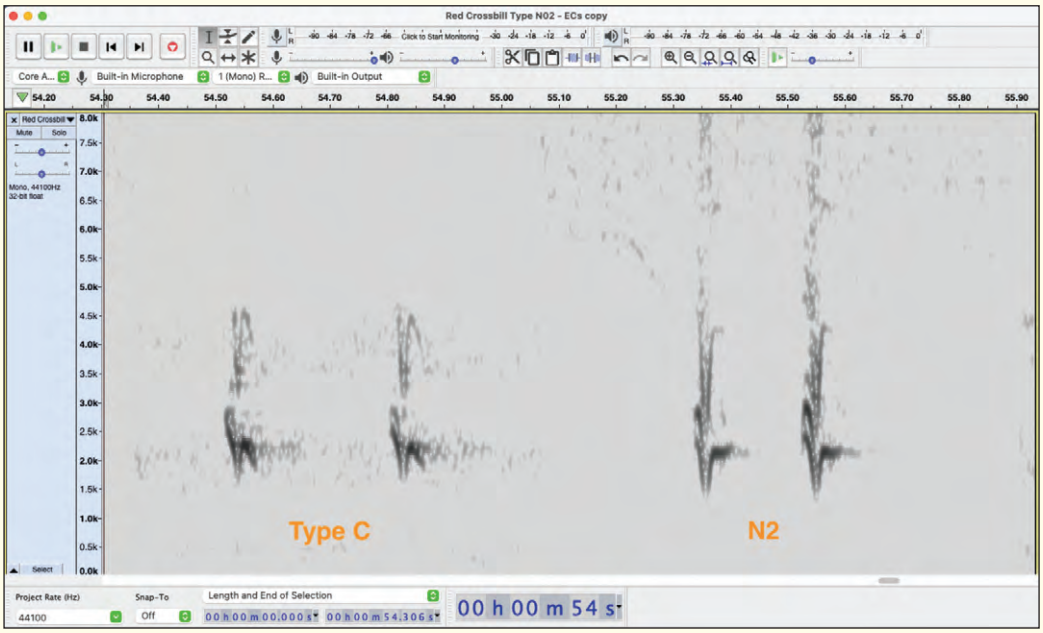

Figure 1. Sonogram showing similarities between Scottish Crossbill 'type C' and 'N2' crossbill calls. The former was recorded in Scotland in the breeding range for Scottish Crossbill, while the latter was recorded across mainland Europe.

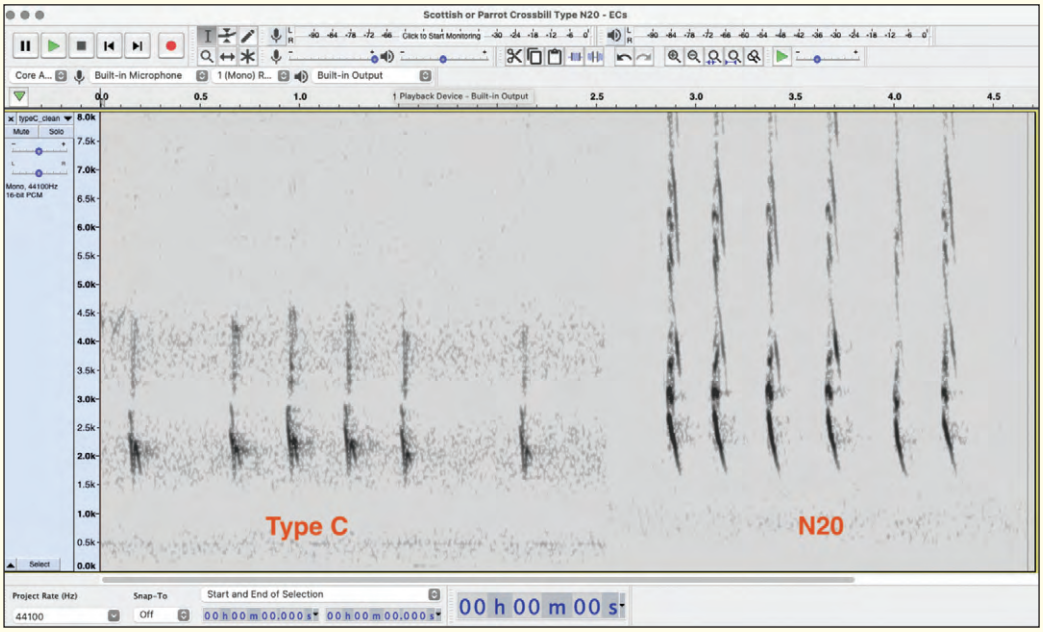

Figure 2. Sonogram showing differences between Scottish Crossbill 'type C' and 'N20' crossbill calls. Note that a different scale on the x axis (time) is used from Figure 1. Both were recorded in Scotland in the breeding range for Scottish Crossbill.

Second, the calls form part of a 'fluent temporal transition from 'type C' from the year 2000 to type 'N20' in the present day' (R. Martin pers. comm.). Finally, birds giving this call appeared to have intermediate sized bills between Parrot Crossbill and Common Crossbill, at least in the field, suggesting Scottish Crossbill. However, it is important to emphasise that there is reason to be cautious about assigning type 'N20' calls to Scottish Crossbill at present. This is primarily due to the fact that the call has not yet been recorded from any individuals with known bill measurements that are consistent with the birds being Scottish Crossbill.

Because of this current uncertainty, SBRC is no longer aware of any plumage, biometric, vocal or genetic criteria that can be used to identify Scottish Crossbill with confidence. As a result, SBRC will no longer consider any records of the species. Collecting full bill biometrics and recordings of calls from trapped birds might help define which calls are being used by Scottish Crossbills at this time.

When the situation is clarified about the identification of this endemic Scottish species, SBRC will update SOC members through *Scottish Birds*.

We thank Ralph Martin and Ron Summers for comments on this paper.

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Plate 59. Woodchat Shrike, female, Ardmore Farm, near Helensburgh, Clyde, 12 June 2021. © *Chris McInerny*

Woodchat Shrike, Ardmore Farm, 12 June 2021 – third Clyde record

D. CAMERON & C.J. MCINERNY

While taking a walk between Ardardan Estate Walled Garden and Ardmore Point near Helensburgh on the north side of the Clyde Estuary on the 12 June 2021, Douglas Cameron (DC), when passing the train level crossing at Ardmore Farm, noticed a buzzing alarm call which he recognised as a Common Whitethroat. On locating the Whitethroat perched on a bush next to a fence in an adjacent field he immediately realised the cause of the alarm - a Woodchat Shrike perched on the next section of fence wire, a species that he was familiar with from travels abroad.

As a shrike-like bird with an orangey brown crown above a dark eye stripe, contrasting against a white throat and underparts, combined with white patches on dark wings, the identification was straightforward. The bird perched side-on on the wires for a few minutes, before flying away towards the farmhouse, showing its white wing patches and the 'skipping' flight action, typical of shrikes.

Though DC did not see the bird again, he put the news out on the SOC grapevine allowing a few other observers to successfully see it later that day, which was fortunate as the bird was not present the next day.

A few photographs were also captured (Plates 59 & 60). which allowed the bird to be confirmed as female, as the head pattern showed an off-black restricted forehead line, ear coverts and mantle that were not the dark black, typical of males.

Woodchat Shrikes are surprisingly difficult to age, even in the hand, with detail required of feather patterns in the open wing (Blasco-Zumeta & Heinze 2021). The wing feathers in the photos of the perched Ardmore bird looked fresh and black, which might indicate an adult (third-calendar-year or older) rather than a second-calendar-year. However, it was not clear if the greater coverts were the same age as the tertials and primaries with it possible instead that the latter were more worn. Without images of the open wing the age could not be established and so the Scottish Birds Records Committee (SBRC) concluded that the bird was best left unaged (www.the-soc.org.uk/bird-recording/recent-decisions).

Additionally, this bird appeared to be of the nominate subspecies *Lanius senator senator* as it showed a prominent white wing patch at the base of the primaries. This is the most recorded subspecies in Scotland and breeds across continental Europe as a summer visitor from Africa. Another subspecies *L.s. badius*, breeding on west Mediterranean islands, has been recorded much more rarely in Scotland, but this taxon does not show the white wing patch, along with some other distinguishing features (Wynn 2013).

Plate 60. Woodchat Shrike, female, Ardmore Farm, near Helensburgh, Clyde, 12 June 2021. © *Chris McInerny*

Woodchat Shrike status in Scotland

Woodchat Shrike is a rare summer visitor to Scotland, with very small numbers seen each year, mostly on islands, with 118 records up to the end of 2019 (Forrester et al. *2007, McInerny & McGowan 2021, www.the-soc.org.uk/bird-recording/sbrc-species-analysis). But it remains very rare on the mainland particularly on the west coast. The Ardmore bird was just the third for the Clyde recording area, and the first for 25 years. The only two previous records were, by coincidence, both seen near Gartocharn to the north of Glasgow at Loch Lomond. The first was a singing male at Little Finnery on 7 June 1985 (*British Birds *79: 576), and the second a female at San Makessan on 17–20 May 1996 (*Scottish Bird Report *1996: 62).*

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Plate 61. Short-toed Eagle, Highland, 20 June 2021. © *Adam Hutt*

Short-toed Eagle, Highland, 20 June 2021 – first Scottish record

A. HUTT

October 1999 saw me twitching the first UK Short-toed Eagle on the Isles of Scilly, thinking I would never see one in Britain again. Little did I know that 22 years later I would find my own, and even re-writing this brings back the excitement (and disappointment) of the day. On 20 June 2021, I arrived on site, near Lairg, Highland/Sutherland, parked the vehicle and walked to the Vantage Point, where I would stay for the next 6.5 hours. Anyone who has done a VP will know it can be a rather soul-destroying day in the field, but equally some days are non-stop action.

The basics of it are that you have a 180-degree field of view, and record on the paperwork and maps what flies through the area in question, recording the species, height, direction of flight and time you watch it for. You scan systematically with your eyes and your binoculars, and during one of those regular scans around 10:30 hrs, I noticed an off-site, very distant large raptor, being mobbed by a smaller bird. I switched to my 'scope and realised it was an eagle being mobbed by a Buzzard. I couldn't fathom out its ID, it looked strange, the heat haze at that distance was terrible, but I noted very pale upper wing coverts before it dropped out of sight.

Fast forward to 12:05 hrs, another scan and again I saw an eagle being mobbed by a Buzzard, but very much on site and much, much closer. This time, even through binoculars, my pulse quickened and I quickly switched to my 'scope. The sight that greeted me left me shaking as the unmistakable shape and plumage of a Short-toed Eagle materialised before my eyes, as it circled and then began hovering! The large-headed look, slim body, long wings, shortish barred tail, extensive pale areas on the upperwing coverts and pale underwing were distinctive, as well as the regular hovering flights. It also had a distinctive way of hunting, with the last 20 m or so of it dropping, its wings were held in a deep V. I didn't know if it was just passing through, so hastily took numerous shaky videos and ended up taking lots of useless pictures.

So here I was, in the middle of nowhere watching a totally unexpected first for Scotland and knowing I couldn't tell anyone. I contacted my boss, already knowing the answer, no news could go out. I forwarded video and photos to him just to confirm in my mind I wasn't going mad. Twenty years ago, being a twitcher at the time, I would have put the news out and suffered the consequences thereafter. These days though, I acknowledged my responsibilities to my employer and the client, obviously not wanting the sack. I felt a bit anxious that no one would get to see it, and even more so as a colleague was working not far away on other sites.

The rest of the VP was dominated by the Short-toed Eagle, circling, hovering, diving down to the moor and clear-fell and in fact I had to try and ignore it to a degree, with a job to do and other birds to record and map. While I couldn't see what it was catching, there was obviously a lot to keep it occupied – the moor hosts Common Lizards, Frogs, young Meadow Pipits as well as Adders – and it remained in the area feeding for the next five hours or so.

The last I saw of the eagle was it dropping into some forestry plantations behind the VP. Later in the week I was back on site, but in cool damp weather, unfortunately I saw no sight of the eagle, but then again there were no hovering Common Buzzards, which had been a common sight on the day. The disappointment of not seeing the eagle again was countered by seeing and hearing my first on site displaying Wood Sandpipers, which was something I had wanted to see for a while.

While the video and photos were not frame-fillers, ageing the bird was difficult from the views, but the bird appears to be a near-adult type from consultation with some experts. In the photos, the head appears quite uniformly dark and barring on the underwing in others maybe confirm this.

In the days and weeks after, I hoped it would be picked up somewhere, even wondering if it survived, with a good population of territorial Golden Eagles to evade, but that wasn't to be.

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Short-toed Eagle status in Scotland

This species breeds across the Western Palaearctic from northern Morocco to Libya, with the bulk of the European population found through the Iberian Peninsula to southern France and fewer east across northern and eastern Mediterranean countries, then larger populations across Turkey and easternmost Europe into Central Asia through southern Russia to Kazakhstan and Iran into Afghanistan.

There have been four accepted records of Short-toed Eagle in Britain, all in southern England:

1999 *Scilly, juvenile, St Agnes and other islands, 7–11 October*

2011 *Devon, one, Dawlish Warren/Orcombe Point, 16 October*

2014 *Dorset, first-summer, Morden/Wareham/Arne, 31 May to 1 June*

same southern Hampshire, 8 June; 12–13th; 30th to 5 July

presumed same Sussex, 10 June; 15–29th, 12 July

presumed same Surrey, Thursley Common, 12 July and

Norfolk, nr Santon Downham, 19–20 July.

2020 *Dorset, Hengistbury Head, 5 October, found exhausted and taken into care.*

There was also one at the Airport/Icart, Guernsey, Channel Islands on 9–10 June 2006, and the 2011 bird was initially seen at St Catherine's, Fliquet, Jersey, Channel Islands on 10–11 October prior being found in Devon.

The date of the Scottish record may indicate an overshoot from the breeding range or a wandering immature bird (as per the 2014 bird). The recent nature of sightings in Britain probably reflects changes prompted by climate change rather than increased numbers of observers and better awareness of the species ID features.

Plate 62. Arctic Warbler, Isle of Tiree, Argyll, 12 September 2021. © *Keith Gillon*

Arctic Warbler, Balinoe, Isle of Tiree, Argyll, 12 September 2021 – first Argyll record

J. BOWLER

A prolonged spell of high pressure with light S to E winds in early September 2021 had seen a good selection of scarce migrant passerines arrive on Tiree, including two Barred Warblers, a Reed Warbler, a Common Rosefinch and three Pied Flycatchers, as well as several Lesser Whitethroats, Garden Warblers and Spotted Flycatchers. At 13:05 hrs on Sunday 12 September 2021, I was driving slowly east along the small road at Balinoe, Tiree having just fed my wife's ponies there. It was a rather calm sunny day and birds were actively feeding in the rank roadside verges, with Meadow Pipits flushing up regularly as I drove along. A Whinchat caught my eye on the south side of the road, so I slowed to view this and as I did so, I flushed a Common Redpoll and a *Phylloscopus* warbler on the north side of the road. The Phyllosc had come out of a large umbellifer and perched in the open on the fence-line. It appeared to be Willow Warbler-sized but even through the naked eye, I could see that it had a bold wing-bar!

Panic set in as I fumbled for my bridge camera. Typically, the bird dropped off the fence just as I focussed my camera on it, and I was left knowing that a first for Tiree was out there to be had, since neither Arctic or Greenish Warbler had yet been recorded on the island. From what I had seen, the rather long bill and stout pinkish legs suggested the former species. I waited in the car, but the bird didn't re-appear, so I drove a little down the road and parked up. Walking back, I called fellow birder Keith Gillon to come over to help relocate the bird. However, just as I rang him, I noticed the warbler once more on the same fence-line, so I dropped the phone and tried a second time for a photo. Again, the bird dropped down at the critical moment and Keith then rang me back. I told him the news and he headed over quickly on his bike from nearby at Hynish.

I had lost the bird in the interim but then relocated it on the south side of the road, where it finally gave itself up to both the camera and to

Plate 63. Arctic Warbler, Isle of Tiree, Argyll, 12 September 2021. © *John Bowler*

more prolonged views down to just 5 m, as it gleaned insects in a patch of meadowsweet and perched on the roadside fence-line. These views confirmed my initial observations of a largish warbler with long wings, a bold supercilium not quite reaching the bill, a bold wing-bar, a shorter second wing-bar, a rather long dark-tipped bill, rather strong pale pinkish legs and mottled ear coverts. It was definitely an Arctic Warbler! I phoned Keith the updated ID news and he quickly appeared. As I watched him cycling west up the road towards me, I signalled to him by arm movements that the bird was close to him on the south side of the road. He stopped and was quickly able to get good views and some nice photos as the warbler fed in the roadside umbellifers between us. After five minutes or so, the bird was lost from view and we caught up for a celebratory chat. We then spent a further 30 minutes looking up and down the road for the bird but failed to relocate it. I had to leave at this point, but Keith kept looking and eventually had distant views of the bird feeding in umbellifers in a field south of the road at 14:30 hrs. It flew back north across the road and he followed it. However, he could not relocate it and it was never seen again despite several searches, admittedly in rather dreich and blowy conditions, over the following days. We were both left with the impression of a very lucky find!

Description

Shape and size: A relatively large warbler, perhaps slightly larger than Willow Warbler although none nearby for comparison and inviting comparison with Wood Warbler in terms of its relative stockiness and long-winged, short-tailed look. The head was nicely in proportion to the body size and was not "big-headed" as Greenish Warblers can appear, with a long gently sloping forehead. The body was quite large and robust for a Phyllosc, whilst the wings were obviously long with a long primary projection. The tail was of medium length, but the long wings gave the bird a rather short-tailed appearance in the field. The bill was quite large for a Phyllosc with a rather broad base and was quite long. The legs were also rather stout. Not heard to call at any point, despite the calm conditions and close proximity.

Plumage: The bird showed rather concolourous rich grey-green upperparts with a darker crown, lacking any hint of a paler central crown-stripe, and a darker upper-tail with a slightly paler nape. There was a long bold pale supercilium that started just after the bill-base (not meeting over the bill as on some Greenish Warblers) continuing past the ear-coverts towards the nape, where it showed a slight uptilt at times depending on the bird's position. The supercilium was bordered below by a pronounced dark line that passed unbroken from the bill-base through the eye and broadening behind it. The paler ear-coverts showed some darker mottling and there was a bold pale eye-ring around the lower half of the dark eye. The folded wing showed many rich-green edgings, especially on the flight feathers, whilst the tertials were greyish-green and lacked any obvious colour-contrast. There was a bold pale wing-bar on the greater coverts and a second shorter pale bar on the median wing-coverts, plus an obvious pale fringe to the leading edge of the closed wing. The underparts were a rather off-white colour with much greyish smudging, especially on the flanks. The longish bill appeared a rather bright flesh-pink with a darker top edge to the upper mandible and some darker tones towards the tip of the lower mandible. The rather long and quite stout legs were obviously pale and bright, appearing yellowy-pink with even brighter, more orange-toned feet, not unlike those of a Willow Warbler. The eye was dark. The bold double-wing-bars and fresh-looking remiges indicated this bird to be in first-winter plumage.

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Plate 64. Rose-breasted Grosbeak, Valyie, Unst, Shetland, 25 September 2021. © *Jim Nicolson*

Rose-breasted Grosbeaks in Shetland & Argyll, September 2021

D. COOPER & J. BOWLER

Rose-breasted Grosbeak, Valyie, Unst, Shetland, 25 September 2021 - second Shetland record

It's not every finder's account that will commence 40+ years ago but here goes...

I remember visiting a second-hand bookshop in Eastbourne, East Sussex with my father probably back in the late 70s and there, tucked away on a bottom shelf reserved for larger books, was Volume II of 'The Book of Birds' that I noticed first! By then, commencing senior school, I already had a basic knowledge of birds primarily seen in Sussex as my parents were very keen birders and had encouraged an interest from an early age. But, whilst the front cover included what were by then the already familiar family names of 'owls, woodpeckers, flycatchers, thrushes, warblers...', on opening the book, there was literally a 'whole New World'... completely unfamiliar... brightly-coloured thrushes, warblers and finches, the like of which I'd never seen before! I immediately wanted to own the book and was thrilled when my Dad agreed to purchase it for me - it became a prized possession!

Owning the book preceded what was first of five annual October family holidays to the Isles of Scilly. The prospect of seeing some of the American landbirds depicted in the book was exciting, and by reading some of the text, I gained my first understanding of what might be possible as it included a chapter titled 'Our greatest travellers' that included maps captioned 'A rapid migrant is the Grey-cheeked Thrush', 'the Black-and-White Warbler is a slow migrant', 'the Cliff Swallows migrate by day' and 'the Blackpoll Warbler migrates at night'...

Plate 65. Rose-breasted Grosbeak, Valyie, Unst, Shetland, 25 September 2021. © *David Cooper*

The first week of our first visit to Scilly produced a Red Kite, a Richard's Pipit, two Short-toed Larks, a Rose-coloured Starling but the only 'yank' was an American Golden Plover, and of course, that wasn't in my book - I only had Volume II. But then, whilst near Holy Vale, I still remember a birder arriving to say that there was a first-winter male Rose-breasted Grosbeak on the Garrison! The moment had arrived - I felt prepared, I knew or thought I knew, what to expect! In those pre-taxi days, running was the norm but we were soon there to join an assembling crowd. And there it was, my first American landbird. Initially, I remember being a little disappointed that it didn't really resemble the illustration of a male in my book... but then it flew, and WOW, I still remember the bright pink flash on its underwings - those were still the days when so often you still had to see a bird to learn its appearance!

Those five annual holidays in what's now oft-referred to as the 'golden era' on Scilly, produced many more American landbirds including another Rose-breasted Grosbeak. But whilst we enjoyed some good finds, ours all came from the east. Foreign trips followed and became my focus, and in-between, living and working in Sussex offered few chances to find any vagrant American landbirds!

But by moving to Unst five years ago, my hopes of finding an American landbird were rekindled. The resident birders had enjoyed finding their fair share and who could forget Mike Pennington's Cape May Warbler, Brydon Thomason's Baltimore Oriole or Robbie Brookes's spring Myrtle Warbler! We moved ourselves, and literally the day we arrived in May 2016, whilst we were unloading our hire van my parents texted news of Shetland's first Rose-breasted Grosbeak – a 'proper' male – being found on Burra. I saw it the following day on my way to return our hire van to Aberdeen. But five years on, it's fair to say, it was beginning to feel like Unst was no longer producing American landbirds... in fact, just an escaped Painted Bunting(!) and I hadn't found that! Was I the curse, in the five years I've lived here I've been the fortunate finder of some top-drawer rarities from most points of the compass... Brunnich's Guillemot & Tengmalm's Owl from the north, Siberian Accentor and White's Thrush from the east, a Fea's-type Petrel and Marmora's Warbler from the south... but what about from the west... not so much, a few scarce waders and a Bonaparte's Gull didn't really compare!

Last year, I'd perhaps come a little closer when eight year old Darcy Cook found a White-crowned Sparrow in her parent's garden on the neighbouring island of Fetlar, Dougie Preston found a Tennessee Warbler on Yell whilst I was working 'just down the road', and then this Spring, Robbie Brookes found a White-throated Sparrow in his garden on Unst.

This last week I wasn't alone in eyeing-up the fast-moving warm fronts tracking east from Newfoundland. A Yellow Warbler had made landfall in Iceland, then an Alder Flycatcher. Over the last week nobody could fail to notice the westerly gales and atrocious weather that we were experiencing! Three days ago, good friend and fellow Shetland birder Will Miles found a Buff-bellied Pipit albeit he wasn't on Shetland but out on St Kilda! In recent years, the Western Isles have again come to the fore as being the prime place to find an American landbird adding both Yellow-bellied Flycatcher and Ruby-crowned Kinglet to the British List last autumn alone and it's no real surprise that some of the rarity-hunting teams formerly working Shetland have now moved their

attentions there. But, Will kindly sent me a message of encouragement to say that he felt Shetland was bound to score too.

News from Iceland revealed a large number of birders had headed southwest in the teeth of the gales and found a trio of Buff-bellied Pipits too. Game-on! I spent my time walking beaches and lonely headlands, peering down geos and seeing plenty of... Rock Pipits! I'd even started looking at wildfowl and waders - desperation was clearly setting in!

Freda Gray, the owner of Valyie, very kindly welcomes birders into her garden. On a visit two days ago I'd bumped into one of her sons, Duncan, who said words to the effect that he 'was sure that I wasn't seeing any birds as the strong winds were exactly in the wrong direction'... I quickly confirmed that was the case... to which he replied 'unless you find something blown-in from America!' I smiled, explained how rarely that happened, but he assured me that 'it had happened before... twice!' The garden at Valyie has previously played host to a Red-eyed Vireo and a White-throated Sparrow, but of course, it has been very well-watched for many years - the odds didn't seem that great!

Then yesterday there was more encouragement. Brydon sent me a message to say there was an American Redstart on Iceland, soon followed by a message to say there was now a Semipalmated Plover too! Dilemma, should I be covering the trees or the beaches - Brydon's advice was 'Cover it all!' Late yesterday evening I noticed that a Hornemann's Arctic Redpoll had been found in southwest Norway. I'd seen a quartet of frosty Redpolls yesterday and it seemed a much more realistic 'find target'! But, during a late evening look at an aurora, I'd also noticed a ship offshore heading east lit up like a proverbial Christmas tree... interesting, from where had it come?

Out at dawn today, I decided upon a quick visit to Norwick beach and then a look at the nearby crop fields for any Redpolls as that was unlikely to disturb any residents at an early hour. It was nice to be out in the calm conditions albeit it was soon evident that most of yesterday's Sanderling had departed overnight. A few Skylarks were calling overhead and a walk around the first fields produced the anticipated flock of Chaffinches but I couldn't see any Redpolls among them. Most of the Chaffinches flew to a nearby small plantation of pines and were sitting out in the first rays of sunshine. As I approached the plantation I heard a short series of calls that I couldn't place... a metallic but soft, almost thrush-like '*quip... quip... quip...*' A noisy Blackbird then took flight and I heard no more calls. I arrived at the next fields and looked through the Chaffinches but again couldn't see any Redpolls. It was a couple of hours too early to make a visit to Freda's garden at Valyie so my mind was already set to head to Skaw.

But, as I glanced towards the garden I noticed a bird sat near the top of one of the largest pines in the early morning sunshine. I raised my bins and thought 'what's that'? There, was what appeared an out-sized Whinchat preening itself! Being very distant, really all I could see was its prominent pale supercilium, pale patch at the base of the primaries, hmmn, it almost looked like a Rose-breasted Grosbeak but surely not! I grabbed a few record shots and decided I'd walk a little closer... *c.* 30 m closer and another look and I could see its bill shape, bloody hell, it really was a 'Grosser'! I watched almost in awe and in those first few seconds it chose to raise its left wing to preen the underside, and 42 years on, I was again being blown-away by those bright pink underwing-coverts!

What to do next, it was only 07:25 hrs and far too early to go requesting Freda's permission to release the news. But then a break of luck, at 07:30 hrs, Freda appeared at her door having noticed my presence - I immediately apologised for being there so early and told her there was a Rose-breasted Grosbeak in her garden and from where it had come and how her son had even predicted it! Thankfully, she broke into a smile and her reply was a simple, almost euphoric... WOW! She seemed genuinely excited. I explained there'd be plenty of people interested in seeing it and asked if she would mind me letting others know. She replied favourably. I never have a phone signal at Valyie and it's set upon a steep slope. Rarity

finding there keeps me fit as I have no option but to climb the near-vertical slope up to Holsens Road to broadcast any news - last year both a Red-flanked Bluetail and Radde's Warbler had sent me skyward! I began my ascent and a third of the way up glanced back at the garden and I saw the Grosbeak chasing a Starling - great, it was still present. I made it to the road, a signal appeared, I gathered my composure and sent the messages. My phone went into meltdown receiving lots of replies and the first birders were already arriving before I'd made my descent back to the garden. It took nearly 30 minutes before it again broke cover, when it flew in from behind the gathering crowd giving its resonating '*quip... quip... quip...*' call as it did - the mystery call I'd heard now resolved!

Saturday proved a popular day to find a rarity being at a weekend for the resident birders, with several of the first of the autumn's visiting birders leaving the isle today but still having time to see it and others just arriving...

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Rose-breasted Grosbeak, Balephuil, Isle of Tiree, Argyll, 30 September 2021 - first Argyll record

The weather chart for the early hours of 30 September 2021 looked very interesting with a warm front passing through the Hebrides coming off a deep fast-moving Atlantic depression. These conditions looked ideal for dropping an American passerine onto Tiree overnight and I set my sights on finding a Red-eyed Vireo the next day - a still much needed Tiree tick. After a spell of heavy rain overnight associated with the warm front, first light on 30 September 2021 saw damp leaden skies with a moderate SW breeze. I opened our upstairs bedroom window at Balephuil to scan the willows and other bushes in our front garden for any migrants new in. Little was moving in the rather wet and windy conditions, but a Goldcrest was calling and then at 07:35 hrs, a dark dumpy bird with bold white wing patches lifted-up out of our rose bushes and headed into our neighbour's garden. Unsure of what I had just glimpsed, I got dressed and headed out to thoroughly check the gardens up and down the road. There were a few Common Redpolls, a Willow Warbler, a Blackcap and a late Swallow, but there was no sign of the mystery white-wing-patched bird. Had I simply imagined it? It was still only 08:30 hrs, so I headed up to the bushes on the hillside above our house at Carnan Mor to see if the mystery bird might have gone there. My check of the bushes revealed two Sparrowhawks, two Hen Harriers, a Robin, two Wrens and a very skulking Song Thrush. The elevated hillside is also a good place to observe bird movements and I stopped to scan around, picking up a group of three Whooper Swans heading south down the coast over Mannal, plus a lone noisy Barnacle Goose heading south in the low cloud. With little to show for my efforts, I started heading back to the office at Balephuil, when at 09:15 hrs, two things happened. Firstly, I received a text from fellow birder Jim Dickson, saying that together with Stuart Gibson, he had just glimpsed what he thought might have been a Woodchat Shrike further along our road, which had shot out of a garden and headed north towards the main road. Secondly, I spotted a large chunky passerine showing massive white wing patches on dark wings flying over our garden, calling a hard '*Tik*' and landing on overhead wires some 100 m below me in the field behind our house. I lifted my bins to be confronted, not with a Woodchat Shrike, but instead with a glorious 1st-winter male Rose-breasted Grosbeak!

Familiar with this species from trips to North America and from perusal of photos of the recent bird on Unst, I simply soaked up the bird's many features. Most striking was a bold white wing bar on the greater coverts with a prominent extension on the primary bases, therefore making this a male bird. There was also a bold white supercilium, dark lateral crown stripes and a central paler crown stripe, bold whitish sub-moustachial stripes contrasting with dark ear coverts, and rich buff tones with a dash of pink on the chest. Add to this, white spots on the tertial tips and faint dark streaking below, plus a second thinner white wing-bar on the median coverts, there was a lot to take in. All the while the bird was

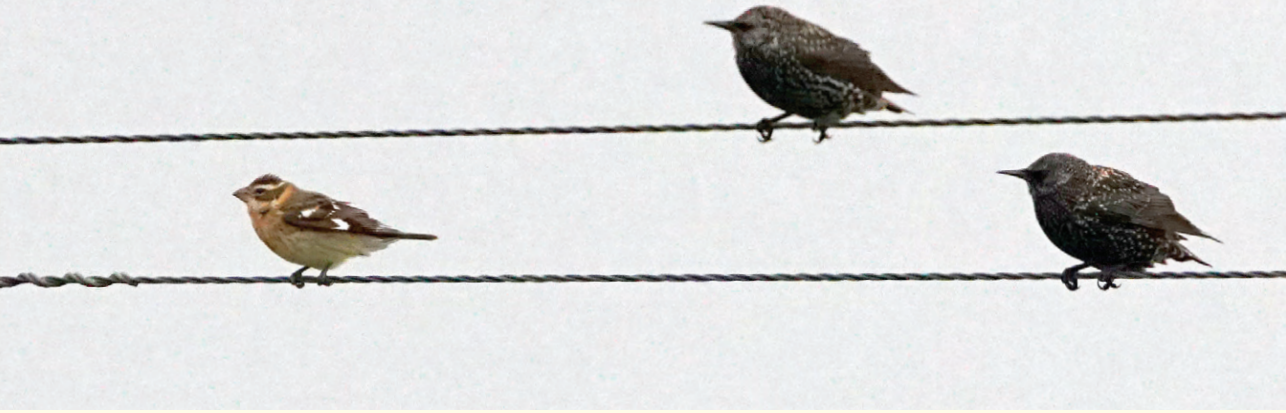

Plate 66. Rose-breasted Grosbeak with Starlings, Balephuil, Isle of Tiree, Argyll, 30 September 2021. © *Jim Dickson*

calling a sharp '*Tik*' call and twisting and turning on its perch. I rattled off a few record shots with my bridge camera and after perhaps three minutes of observation, the bird lifted off the wires, revealing rich pinky-red underwing coverts before flying back up our road. I phoned Jim to alert him of the bird's identity and location, and he picked it up landing on wires in front of him, Stuart Gibson and David Jardine, whilst still on the phone to me. I headed down to join them on the road and it transpired that they had all obtained good but brief views of the bird perched on overhead cables. They had also managed to get some slightly closer photos of it before once again it had headed off north towards the main road. Although obvious on the wires, the bird went to ground and proved very hard to relocate, even with fellow birder Bob Grove also joining the four of us in the search. After many hours of searching, often in heavy rain, Jim eventually relocated the bird briefly nearby at Main Road Farm at 13:30 hrs, but the bird quickly disappeared once more and was not seen again.

Description

Shape and size: A chunky passerine with long wings, a shortish-looking tail and a large bill, inviting comparison with Hawfinch. The body was thickset, and the neck was short adding to the chunky feel. The long wings with relatively long primary extension exacerbated the apparent shortness of the tail. However, the tail was actually mid-length and was often held slightly cocked, switching about a bit as the bird twisted and turned on its perch. The big bill was heavy and conical in shape, whilst the legs were rather short and stocky. The wings looked long and quite broad-based in flight. The bird called regularly both when perched and in flight: a loud and hard '*Tik*'

Plumage: A strikingly plumaged bird! Most obvious in flight were large rather rounded white patches at the base of the primaries on otherwise very dark upper wings with a thinner white bar on the median coverts. A pinky-red flash was also visible on the underwing coverts when the wings were raised. When perched, the bird showed a bold whitish supercilium over the eye, which narrowed and bent up towards the nape. This contrasted strongly with a dark brownish grey crown and ear coverts. There was a narrow paler grey stripe on the centre of the crown. Beneath the ear coverts was a thick pale whitish malar/sub-moustachial stripe which became rich buff as it bent up towards the nape. The breast had similar rich buff tones with a splash of pink in the centre and bore faint darker brown streaks. The buffy wash and faint dark streaks also continued onto the flanks, whilst the belly and vent were whiter and less obviously streaked. The closed wing was blackish with a bold white flash at the base of the primaries and a short bold white wing-bar on the median coverts, with a fainter, narrower and buffier bar on the greater coverts. There were a few whitish tips to the dark tertials. The mantle was mid grey-brown, streaked darker. In flight, the tail looked slightly darker above than the rump and mantle. The bill was greyish pink, whilst the legs and feet were darkish grey, and the iris was dark.

John Bowler, Balephuil, Isle of Tiree, Argyll.
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Plate 67. Pectoral Sandpiper with Lapwing and Shoveler, Frankfield Loch, Clyde, 11 October 2021. © *Ian Fulton*

Four Pectoral Sandpipers, Frankfield Loch, Clyde, 26 September 2021

G. BROWN

Following the report of a Pectoral Sandpiper at Frankfield Loch, 24 hours earlier on the Clyde SOC WhatsApp group, I arrived at Loch Road around 11:00 hrs and was greeted by a birder (Stuart) who was already watching the bird.

I quickly set up my scope, had a look then invited Stuart to have a closer view of the bird through the scope. When I returned to my scope, I saw another bird nearby and could now see the two birds in view together. At first glance, they appeared to be very similar in size, shape and behaviour - for a brief moment I thought back to conversation I had a few weeks previously with the patch birder Donald Wilson. He had told me what birds were hopefully on their way and what to look out for... "a Pec Sand would be mega!" he had said, but with me being a complete novice birder I took this as a very improbable event. It was this that made me think, surely there can't be two!

As I recorded video of both birds, they, along with almost everything else on the water flushed. I waited until all the birds had settled but could not relocate the two Pectoral Sandpipers, so I took the opportunity to upload my video of the two birds to the SOC Clyde WhatsApp group with the message. "2 Pectoral Sandpiper at Frankfield Loch 11.20. Viewed from the road". Being a novice, I really needed an experienced birder to corroborate the find.

I decided at this point to make my way to the 'suds pond' at the south eastern edge of the loch, to give me views over the southern part of the loch, in the hope I could relocate the birds. I was soon rewarded, the Pectoral Sandpipers were amongst some Teal on a small mud flat, but to my amazement there was now three birds together! I was beginning to doubt myself, I must be mistaken, surely?

After five minutes trying to confirm the bird's identity, I heard a voice behind me ask "Anything interesting?" I turned to find photographer John Queen - he couldn't have arrived at a better time, I needed all the help I could get. I

explained to John that there was possibly three Pectoral Sandpiper on the loch, to which he replied "what's the chances of that?"

We then set about trying to confirm the identity of the three birds, during which I did a bit of nervous pacing up and down. What if I'm wrong? Here was I, a complete novice birder, informing the local birding community, that there were three Pectoral Sandpipers on Frankfield Loch - I had better not be wrong!

John and I managed to confirm the key features on all three birds and were now happy all three were the same species. After some more nervous pacing, and chatting with John, I was now confident enough to post an update to the WhatsApp group: "After corroborating with two others at Frankfield Loch. We are 90% sure there are now three Pectoral Sandpipers. I'll upload video shortly".

My next aim was to record all three together in the one video, but all birds were once again flushed and the Pectoral Sandpipers moved back to the north of the loch.

While walking back to the original area, I met Alan Savage looking for the birds. I took him back to the suds pond area where we soon relocated the Pectoral Sandpipers - I had one in my scope while Alan had two in his. He confirmed their identity and I, with a sense of relief, updated the local WhatsApp group; "First birder to arrive with scope has confirmed three Pectoral Sandpiper at Frankfield"

Since the birds were now a distance away, we decide to get closer so headed back through the woods to the Loch Road area. On our way back, we could see Andrew and Colin Russell in the distance. I still felt I needed further validation, so was delighted to see them, especially when they both confirmed that all three birds were definitely Pectoral Sandpipers. Phew, I definitely let out a further sigh of relief! After all the excitement, I decided it was time to head off and calm down - it was definitely a lot for a beginner to take in.

On my way home, my phone beeped an update on the WhatsApp group. I pulled the car over to check and saw a post that Alan, Andrew and Colin, they had just found a fourth Pectoral Sandpiper!

I would like to thank John Queen, Alan Savage, Andrew and Colin Russell for their part in confirming the identity of the three Pectoral Sandpipers and congratulate them on finding the fourth - amazing! Thanks also to Donald Wilson for his guidance and encouragement in helping me enjoy my new hobby. What an experience, coming right at the very beginning of me enjoying birding - what a day to remember!

Gary Brown, Uddingston, Glasgow
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Plate 68. Three Pectoral Sandpipers (circled) with Lapwing, Frankfield Loch, Clyde, 26 September 2021. © *Alan Savage*

Plate 69. Greater Yellowlegs (foreground) with Lesser Yellowlegs, RSPB Loch of Strathbeg, North-East Scotland, 1 October 2021. © *Tim Marshall*

Greater Yellowlegs, RSPB Loch of Strathbeg, 29 September 2021 – third North-East Scotland record

A. CARROLL

In 2012, John Nadin and I motored up the A90 together to see a Greater Yellowlegs. RSPB Loch of Strathbeg, where the bird had decided to stop off, was the destination and thankfully, we connected with the rare American wader that day. Loch of Strathbeg is an incredible reserve and rarely fails to disappoint. It always reminds me a little bit of Norfolk with its scrapes and ditches and sheer number of birds. A place that I could certainly see myself living close to if I could ever persuade Mrs Carroll to move to North-East Scotland.

Fast forward to 2020 and 2021; we all know that being in the grip of the COVID-19 pandemic made things difficult. My wife, Caroline, and I reflected on what we wanted from life and so in the early summer of 2021 we decided to move out of Motherwell to a more rural location. Having resided in Lanarkshire for 15 years, I felt I had done my time.

I wanted to move somewhere with good year-round birding. After much debate, a few site visits, and some pleading, we settled on a small holding near Fraserburgh, or should I say near Loch of Strathbeg! The reserve is 20 minute drive from our house and I made the most of that through June and July visiting many times. During one such visit Little Egret, Temminck's Stint, summer-plumage Ruff, summer-plumage Black-tailed Godwit, drake Garganey, Little Gull and Marsh Harrier were all present - it really does feel like the Titchwell of the north-east at times.

As the summer began to give way to autumn, it was nice to be able to drop in to see the Crane family which showed regularly and the Great Egret which was more erratic - unlike the plastic one which still fools people, or so I've been told!

On the 29 September, I had been at an appointment in Peterhead. On the way back, and not feeling great, I debated about whether to stop in at the Loch of Strathbeg visitor centre. There had been a few Pectoral Sandpipers around, so after a bit of internal debate, I decided to stop in and give it 20 minutes.

The scrapes were looking fantastic, the sun made viewing excellent and as I scanned across with my bins I picked out a Little Egret and a few Dunlin. I was already glad I had stopped, then as I continued to scan, I picked up a more interesting wader out the side window. It resembled a Greenshank but the legs even through the bins looked very yellow. That's worth a better look I thought. The windows at the visitor centre are dreadful, they resemble magic mirrors and are also at a terrible height for telescopes. They certainly weren't designed by a birder! I needed to open the window, to try and get a better look at the wader, which I was now beginning to think could be a Lesser Yellowlegs. I opened the window with all the poise and fieldcraft of a marching band but thankfully the wader was unperturbed.

I was alone in the visitor centre as I zoomed up my scope. The bill was wrong for Lesser Yellowlegs, longish and slightly upturned and it was too big to be the American wader recorded eight times previously in North-East Scotland. There was a pause in my own mind and then the wee voice that birders all know so well said, "Yeah, you're right it's not Lesser, so why is it not a Greater Yellowlegs?" My heart began to pump and hands began to shake a bit. It can't be, can it? I floundered around trying to get some images through my scope with my phone, becoming irritated and frustrated with myself at my lack of photographic acumen. Maybe I should invest in a decent photo set up? I was now quite sure it was a Greater Yellowlegs but had yet to see the bird's rump.

I called two friends, Ken Shaw and Alan Lauder, to explain what I had and that I was 90% sure it was a Greater Yellowlegs. I sent them the pictures I had, which would not have been out of place in a guess the bird competition! They both agreed, I needed to see it in flight but that it looked good and that I should put it out as a strong probable.

I texted the local group to put the news out as a strong possible. After what seemed like an age, the bird got up and flew across the lagoon, a large square white rump and no white wedge up the back! I allowed myself a fist-pump. It joined a Greenshank which made the legs stand out even more. After upgrading the bird to a definite Greater Yellowlegs, I waited nervously for people to arrive. They did and thankfully so did their cameras. Soon the bird was being snapped by several people and to my relief decent pictures were being obtained. I returned home via the off-licence and 'Stella' and I settled down to read the Greater Yellowlegs account in *Birds of Scotland* which was written by Alan Lauder of all people!

Two days later, and still pinching myself a bit, I was sat in the office trying to catch up on some work when a text came through, "Lesser Yellowlegs now with Greater at Strathbeg!" I rushed out of the door and was soon watching a Lesser Yellowlegs and my Greater Yellowlegs in the same scope view - the ninth and third records for North-East Scotland, and unprecedented in the UK to have both species together. There was also a Pectoral Sandpiper present which made for an amazing American hat-trick. So far, my move to North-East Scotland is working out just fine for me!

Description

Size: As big as Greenshank, larger than Lesser Yellowlegs. **Bill:** Long and slightly upturned. Less thick and shorter than Greenshank with which the bird started to associate with. **Legs:** Yellow and proportionately longer than Greenshank giving the bird an almost stilt like quality at times. **Rump:** Large square white rump, lacked the white wedge of Greenshank.

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Plate 70. Grey Phalarope, Carnoustie, Angus & Dundee, November 2013. © *John Anderson*

Record Numbers of Grey Phalaropes in Fife, October–November 2021

K.D. SHAW

Smout (1986) described the Grey Phalarope as a rare vagrant to Fife and quoted ten records. Since then the status of this species has changed, with increased numbers noted, but it is not an annual visitor, and the 'record day count' is of three off Fife Ness on 28 September 2007, with two off Kinghorn on 9 October 2010.

Fife Ness, the most easterly point of mainland Fife, has a long history of the study of bird migration, as outlined in Lauder *et al.* (2020). In recent years, seawatching has been popular, again, at Fife Ness. The establishment of the Fife Bird Club seawatching hide in 1998 was a critical step forward, as is the increased communication and collaboration of birdwatchers through the Fife Bird News 'WhatsApp' group, which more recently has allowed Fife birdwatchers to catch up with 'day counts' from the Ness.

On 20–21 October the wind was from the north. The 21st was a good seawatching day at the 'Ness' with late shearwaters, three species of diver, an adult Pomarine Skua and some wildfowl. It was calmer on 22nd but birds were still moving. It went a little quiet later that afternoon and I started to scan around, noticing a group of small gulls about 1,200 m out. When scanning I always slow down at groups of gulls, particularly small gulls. As I did I noticed some phalaropes flying around with the gulls. I wasn't sure how many, so I put a quick message on the Fife 'WhatsApp' chatline settling on a total of three plus. I saw them flying several times, albeit briefly on each occasion, and became convinced there were actually five.

Will Cresswell is the ideal co-observer, he covers the ground, is always positive and responds very quickly. I messaged then called

him, and 15 minutes later he was there. There were restrictions on numbers in the hide, but Will sits outside anyway. He sat on the new 'Willie Irvine' bench in front of me. There were few markers out at sea, but using passing birds I got him onto the area where the phalaropes were sitting on the water. After another 15 minutes we both watched as five Grey Phalaropes took off and flew north.

The next day there were no phalaropes, but a White-billed Diver was photographed from the hide by Barry Farquharson, and 74 Little Auks were recorded. The following day three Grey Phalaropes were noted throughout the day, and another one and a White-billed Diver were seen near St Andrews. On the 26th, another Grey Phalarope was seen at 'the Ness'. Seawatching continued to be good into November with smallish counts of Little Auks, a few Pomarine Skuas, Great Northern Divers and late shearwaters. Around mid-afternoon on 2 November 2021, I received a message from Sam Taylor saying he had four Grey Phalaropes at the Ness. I went down and Sam put me on to the area where the phalaropes were. We could not see them but he had seen them when a Bonxie put them up. It was the exact same area where the five had been days before. I concentrated on this patch of water. It was fairly calm, westerly F1–2, but with a swell. Sam left, but Mike Martin arrived and after about 20 minutes he alerted me to a group of small gulls in a completely different area at about 700 m, close to the shore and to the north. I was loathe to move my scope from the area where the four phalaropes were, but I knew a group of small gulls raised the possibility for finding more associated with them. As soon as I focused on the small gulls swimming on an 'oily' part of the sea I could see phalaropes swimming amongst them. I told Mike there were at least a dozen. I watched a small group of about five, leave the group and fly south. Then ten birds got up, one headed south to join the other group and Mike and I independently counted a flock of nine fly north. We put the news out as '14++' birds.

The following day (3rd) the wind was NW F3 backing to N F5, and three Grey Phalaropes were seen. The day after (4th), the wind was WNW F5, but decreasing. It was beautiful during mid-afternoon with a 'rolling' sea and superb light. Tommy Ross, Les Willocks, Angus Duncan and I were in and around the hide watching the Little Auk 'line', when at 14:29 hrs a loose flock of Grey Phalaropes came past flying north. We were onto them early and watched them all the way and out of sight. They were just north of 12:00 hrs from the front of the hide when Tommy announced "difficult to count, lots of sub groups, but three out front, three further out and a few trailing behind, there are at least 28". This constitutes a new day count record for Fife. The next day was another good day at Fife Ness, with one White-billed Diver, eight Great Northern Divers, one Pomarine Skua, five Grey Phalaropes and 833 Little Auks. November is not the month to stop seawatching!

One particularly interesting aspect of this influx of Grey Phalaropes is how localised it was. In late October and into November small numbers of Grey Phalaropes – up to four together – were seen at various sites in NE England. However, they were never in the numbers seen off Fife Ness. Luckily, however, we do have counts from the Isle of May, where seawatching has been popular in recent years giving us a much better idea of movements and passage of seabirds around the island. The Grey Phalarope is a vagrant to the Isle of May, and until this year there were only two records, both of single birds, in October 1983 and September 1996. This year late October and early November brought the third to sixth records for the island. The peak was on 4 November 2021, when the warden, David Steel, was watching four Grey Phalaropes on the sea and another three flew past. This total of seven is the highest day count from the May.

Table 1. Summary of 2021 observations in Fife.

Date	Wind	Count
22 Oct 2021	N F1 after strong northerlies	5
24 Oct 2021	W F3–4	3
26 Oct 2021	W F4 rain	1
2 Nov 2021	W F1–2 becoming calm	14
3 Nov 2021	NW F3 backing to N5	3
4 Nov 2021	WNW F5	28
5 Nov 2021	WSW F3–4	5
6 Nov 2021	W F6	2

Plate 71. Grey Phalarope, Carnoustie, Angus & Dundee, November 2013. © *John Anderson*

Associated counts

Singles near St Andrews, Fife on 24 October 2021 and 9 November 2021. Four off Lower Kilminning, Crail, Fife on 6 November 2021.

History in Scotland and the UK

The UK has a long history of influxes of Grey Phalaropes, but most have involved sightings in the west or the north of the country, not the east coast of mainland Scotland. As far back as the autumns of 1950 and 1957 there were September influxes into SW England. In 1950 at least 39 birds were noted (The Autumn Invasion of Grey Phalaropes in 1950. *British Birds* 44 [1951] 247–250) while in 1957 about 68 birds were seen, with peaks of over 30 in West Cornwall & Scilly and 7–12 noted from east Cornwall and Hampshire (Sage and King 1959). Subsequent larger influxes occurred in 1959, 1960 and 2001. The largest influx into Scotland occurred during October and November 2008, when up to 197 were recorded near Gedintailor, Skye, Highland on 2 November, which remains the highest site count in Scotland. Also in October 2008, totals of 157 were logged in the Outer Hebrides, and at least 200 were seen in Orkney including a group of 110+ at Scapa Flow towards the north end of the Churchill Barriers (McMillan *et al.*, 2010).

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SCOTTISH BIRD SIGHTINGS

1 October to 31 December 2021

S.L. RIVERS

Records in Scottish Bird Sightings are published for interest only. All records are subject to acceptance by the relevant records committee.

The following abbreviations for recording areas are used: Angus & Dundee - A&D; Argyll - Arg; Ayrshire - Ayrs; Borders - Bord; Caithness - Caith; Dumfries & Galloway D&G; Highland - High; Lothian - Loth; Moray & Nairn - M&N; North-East Scotland - NES; Outer Hebrides - OH; Perth & Kinross - P&K; Shetland - Shet; Upper Forth - UF.

Some exceptional seawatching highlights were to be had off the east mainland and Orkney, the Baikal Teal was still on Fair Isle, the second to fourth Red-eyed Vireos of the autumn were on Shetland, a stunning Varied Thrush was an addition to the Scottish list, and what we lacked in Yellow-browed Warblers, was amply compensated for by the range of other passerines.

'Grey-bellied Brant': a returning bird with characteristics of this form was at Tornagrain/Balloch (High) from September to 4 November. **Red-breasted Goose:** one was at Loch Gruinart RSPB Reserve, Islay (Arg) on 2–3 November. **Todd's Canada Goose** *(form interior)*: singles were at Montrose Basin (A&D) on 13th and 22–24 October; at Nigg Bay (High) on 20–21 October; at Loch Eye (High) on 20–21st; at Balephetrish, Tiree (Arg) from 21 October to 15 November; at Ardmhor/Eoligarry, Barra (OH) on 9–20 November; at Kenovay, Tiree from 22 November to 17 December; at Mid Yell, Yell (Shet) on 22–23rd; then Gossabough, Yell on 24–26th; at Auchencorvie, near Campbeltown (Arg) on 24 November; at Mersehead RSPB Reserve on 3–9 December; at Vatsetter, Yell on 17 December, and at Loch Paible, North Uist (OH) on 19 December. **Ross's Goose:** a white-morph adult was at Montrose Basin (A&D) on 20–23 October, with presumed same nearby at Lunan Bay on 22nd; one at Fail/Tarbolton (Ayrs) on 4–7 November, and at Hunterston Sands (Ayrs) from 28 Novenber to 17 December. **Snow Goose:** one was on Sanday (Ork) on 5–6 October; three white-morph birds were at Findhorn Bay (M&N) on 6–14 October; two on Fair Isle on 6th; two at The Loons RSPB Reserve, Marwick, Mainland (Ork) on 10–11th; three near Elgin (M&N) on 18th, then near Loch Spynie (M&N) from 20 October to 22 December; one at The Range, South Uist (OH) on 20–22 October; and at Ardivachar, South Uist on 1 November; singles at Skinflats Lagoons RSPB Reserve (UF) from 20 November to 17 December; at Loch Bee, South Uist on 21 November; at Grenitote, North Uist (OH) on 28 November; then Malaclete, North Uist (OH) on 5 December; one at Airth, near Falkirk (UF) on 19 December, and one at Sollas, North Uist on 28 December. **Taiga Bean Goose:** seven flew over Ferry Hills/North Queensferry (Fife) on 6 October; over 140 seen regularly near Jawcraig Farm/Oakendykes (UF) from mid-October, with similar numbers into December. **Tundra Bean Goose:** about 20 noted in October, mostly in Shetland but also on Fair Isle, in Highland, Aberdeenshire, Fife, Borders and Argyll. In November, two were at North Sandwick, Yell (Shet) on 1st; and singles at Loch Feochan, near Kilmore (Arg) on 1st; at Ringasta, Mainland (Shet) on 8th; at Skateraw/White Sands Quarry (Loth) on 9–27th, and at Burravoe, Yell on 25th. The last was one at Fleck, Mainland (Shet) on 11 December. **Bewick's Swan:** at least one flew south over Inverbervie on evening of 16 November. **Ruddy Shelduck:** singles were at Caerlaverock WWT Reserve (D&G) on 5 October; at Lochwinnoch RSPB Reserve (Clyde) on 9 October; at Fail (Ayrs) on 11–19th; at Drongan (Ayrs) on 30th; at Dingwall (High) on 30 October, and at Martnaham Loch (Ayrs) on 7–9 November.

Baikal Teal: the eclipse drake was still on Fair Isle to 2 October (potential first for Scotland). **Blue-winged Teal:** a female/immature flew over Fort William (High) on 2 October. **American Wigeon:** singles were at Balnakeil Marsh (High) on 4 October; at Bridgend, Islay (Arg) from 20 October to 15 November; at Udale Bay RSPB Reserve (High) on 3–21 November; at Lochwinnoch RSPB Reserve (Clyde) on 23 November, and at Bowmore, Islay on 2 December. **Green-winged Teal:** four reported in October, single drakes on North Ronaldsay (Ork) from 19 October; at Airdmhor ferry terminal, Barra (OH) on 26–31st, and at Loch Bee, South Uist (OH) on 26th, with two there on 27th. At least nine in November, from Highland to Upper Forth, all singles except for two at Airdmhor ferry terminal, Barra on 3–6 November, and nine in December, from Highland to Clyde, again mostly singles but two were at Tain Links, Tain (High) on 21–26th, with one present into 2022, while one remained at Airdmhor ferry terminal, Barra

into 2022. **Ring-necked Duck:** four were still at Loch Stiapabhat, Lewis (OH) from September to 4 October, and a drake at Loch of Bosquoy, Mainland (Ork) to 2 October. About nine others were seen in October, from Shetland to Moray and Argyll with peaks of two at Loch Bhasapol, Tiree (Arg) on 4–11th, and 25–28 October, and two at Loch Skerrols, Bridgend, Islay (Arg) on 29 October. About 10 in November, again from Shetland to Moray and Argyll with a peak of three on Loch Bhasapol, Tiree from 15 November into December. Two remained at Loch of Tingwall, Mainland (Shet) from 30th to 2 December, and one into 2022; the three on Loch Bhasapol, Tiree lingered to 20 December. Singles were at Loch a Phuill, Tiree on 9–17 December, at Martnaham Loch (Ayrs) from 21 December into 2022; at Nether Kinellean, Strathpeffer (High) on 24th, and at Mugdock Reservoir, Milngavie (Clyde) on 25 December. **Lesser Scaup:** a first-winter drake was at Loch Skerrols, Islay (Arg) from 3 November, with three there on 21st, four on 22nd; and five on 23–28 November - highest Scottish site count, with three still on 2 December, four again on 11–12 December and two still into 2022 ; a drake was at Loch Stiapabhat, Lewis (OH) from 21 November to 27 December; a first-winter was at Loch an Daill, South Uist (OH) from 22 November to 20 December; a drake at Auchenreoch Loch (D&G) on 29–30 December, and at New Cumnock (Ayrs) on 30 December into 2022.

King Eider: a 2cy drake was still near Laxfirth, Mainland (Shet) to 15 October; an adult drake in Clift Sound, Wester Quarff (Shet) on 8–16 October; one in Spey Bay (M&N) on 23–27th; a 1cy drake near Tyninghame (Loth) on 23 October, then off Cockenzie (Loth) on 25th, and nearby at Musselburgh (Loth) on 31 October to 17 November, then off Portobello (Loth) on 30 November to 3 December; a drake at Laxfirth, Mainland from 28 October to 7 November and on 3 December; one at Hopeman Point (M&N) on 31 October to 24 November; a 2cy drake was at Gutcher, Yell (Shet) on 4 November; one off Lossiemouth (M&N) on 7th, and near Kingston (M&N) on 13 November; off Wester Quarff on 3 December; at Wadbister Voe/Laxfirth on 3 December, and off Uyeasound, Unst (Shet) on 3–22 December. **Surf Scoter:** single drakes were still at Bay of Skaill, Mainland (Ork) to 3 October; off Musselburgh/Fisherrow/Joppa (Loth) to 27 October, with two on 9–10th, and 30th, three [2 drakes] on 31 October to 17 November, two still from 18 November to 31 December, and three on 24 December; in Sound of Taransay, Harris (OH) on 5–22 October,with two there on 29 October to 2 November, and three to 15th; off Fair Isle on 11–20th; one at Spey Bay (M&N) on 12th; off Gullane Point (Loth) on 24th to 10 November, off Craigston/Alathasdal, Barra (OH) from 24 October into 2022; at Loch Olaidh an Iar, South Uist (OH) on 28 October; off Kinshaldy/Tentsmuir (Fife) on 1 November; off Nairn (M&N) on 7 November; two off Lossiemouth (M&N) on 11–23 November, with three on 17th; a female at Stornoway, Lewis (OH) on 15–27th; two at Sgarasta Mhor, Harris (OH) on 17th; singles off Rubha Aird-mhicheil, South Uist (OH) on 5 December; at Taftend, Westray (Ork) on 7 December; at Kirkwall, Mainland (Ork), and two off Lossiemouth on 19 December. **White-winged Scoter:** the adult drake returned to Musselburgh/Fisherrow (Loth) from 26 October to 29 December. **Black Scoter:** an adult drake was near Lossiemouth (M&N) from 11 November to 27 December.

White-billed Diver: one was in South Nesting Bay, Mainland (Shet) on 5–16 October, with two on 8–9th; one flew past Lamba Ness, Unst (Shet) on 11 October; two were off Papa Westray (Ork) on 22nd; singles flew past Fife Ness (Fife) and North Queensferry (Fife) on 23rd; past St Andrews (Fife) on 24th; Thorntonloch (Loth) on 25 October; past Fife Ness on 5 November; two past Griminish, North Uist (OH) on 7 November; one past West Sands, St Andrews (Fife) on 9th; at Dunbar (Loth) on 10th; six were off Papa Westray on 13th, and two still on 21st; one was off Staffin Island, Skye (High) on 13th; one in South Nesting Bay on 13th;and two there on 21st; singles flew past Lamba Ness, Unst on 19th; Portree, Skye on 21st, Girdle Ness, Aberdeen (NES) on 22nd; past Eyemouth (Bord) on 22nd; past Girdle Ness and Fife Ness on 28 November. One was again in South Nesting Bay on 10–21 December. **Fea's/Desertas Petrel:** one flew past North Ronaldsay (Ork) on 17 October. **Cory's Shearwater:** one flew past North Ronaldsay (Ork) on 4 September, with one found dead there on 18 October. **Balearic Shearwater:** singles flew past Fife Ness (Fife) on 2nd, 12th and 17 October; past Start Point, Sanday (Ork) on 8th, and past Brora (High) on 17 October. **Pied-billed Grebe:** the returning adult male was still at Loch Feorlin, near Lochgilphead (Arg) from September to 18 November at least.

Glossy Ibis: singles were at Caerlaverock WWT Reserve (D&G) on 23 October; at Loch of Strathbeg RSPB Reserve (NES) on 25 October; near Middleton Hall, Middleton (Loth) from 30 October to 5 November; at Blair Drummond GPs (UF) on 21–26 November; on Fair Isle on 15–18 December; seven on Westray (Ork) on 15 December, eight there on 16–17th, 10 on 18–21st, and 11 on 22–24th; one at Haroldswick, Unst (Shet) on 18th; one at Bruernish, Barra (OH) on 18 December into 2022; two near Burrafirth, Unst on 19th; three at Unst on 20–23rd; singles on Foula (Shet) and at Reay (Caith) on 20th; one on North Ronaldsay (Ork) on 22nd, and four still on Westray on 28th, and two on 29 December.

Plate 72. Glossy Ibis, Middleton Moor, Lothian, 3 November 2021. © *Andrew Dodd*

Spoonbill: two were at Guardbridge, Eden Estuary LNR (Fife) on 16 October. **Bittern:** singles were at Loch of Strathbeg RSPB Reserve (NES) on 14 November; at Leverburgh, Harris (OH) on 8 December; at Skaw, Whalsay (Shet) on 15–18th, and at Brodie Castle, near Forres (M&N) on 16–18 December. **Cattle Egret:** three were at Gremista, Mainland (Shet) on 31 October, with one still on 1 November; singles were at Voeside, Bressay (Shet) on 1 November; at Kingussie (High) on 5–16 November, and at Letham Grange, near Arbroath (A&D) on 9th, with presumed same at Keptie Pond, Arbroath on 21 November. **Great White Egret:** one was at Montrose Basin (A&D) throughout; one still at Sandwater, South Nesting, Mainland (Shet) to 5 October, with around a dozen more seen in October from Shetland to Fife and D&G, all singles except for two at Caerlaverock WWT Reserve (D&G) on 5–10 October. Seven were reported in November, from Aberdeenshire to Angus and D&G, all singles except for two at Glencaple (D&G) on 19th. About eight in December, Caithness to Borders and D&G, all singles except for three at Mersehead RSPB Reserve (D&G) on 4th.

Honey-buzzard: singles were at Norwick/Haroldswick, Unst (Shet) on 8 October; at Bixter, Mainland (Shet) on 9th, and over Thurso (Caith) on 16 October. **Northern Harrier:** a juvenile female was at Ham/Hametoun, Foula (Shet) on 12 October. **Crane:** three (one ad) were still at Loch of Strathbeg RSPB Reserve (NES) from September to 11 October; three were near Rosehearty/Tyrie (NES) on 1 October; six (4 ads) were at Newton Craigmaud/A98, near New Pitsligo (NES) on 7 October, with three (2 ads) still on 25–30th; three at Boyndie, near Banff (NES) on 9th, and three at Ladybank (Fife) on 12 October. **American Golden Plover:** singles were at Baleshare, North Uist (OH) on 3–7 October; at Ringasta, Mainland (Shet) on 13–15 October; at Eoligarry, Barra (OH) on 13–17th; at Fleck/Boddam, Mainland (Shet) on 14–25 October, and at Muness, Unst (Shet) on 6–7 November. **Dotterel:** a late bird was at Torness (Loth) on 10 October. **Killdeer:** one was at Sandaig/Balevulin, Tiree (Arg) on 22–23 November. **Upland Sandpiper:** one was at Haroldswick, Unst (Shet) on 30 October. **Buff-breasted Sandpiper:** one was at West Gerinish/The Range, South Uist (OH) on 2 October. **Pectoral Sandpiper:** singles were still at Loch of Strathbeg RSPB Reserve (NES) to 8 October, and at Frankfield Loch (Clyde) to 12 October. Thirteen others in October from Orkney to Aberdeenshire and Clyde, all singles except for three at Loch Stiapabhat, Lewis (OH) on 1st. Two in November, singles at Balmore Pool, Milngavie (Clyde) on 1st, and at Musselburgh Lagoons (Loth) on 13th. **Semipalmated Sandpiper:** singles were at Pool of Virkie, Mainland (Shet) on 2–5 October, and at Loch Bee, South Uist (OH) on 2–5 October. **Long-billed Dowitcher:** one was at Loch Gruinart RSPB Reserve, Islay (Arg) on 29 October to 1 November. A dowitcher species (probably Long-billed) was at Loch of Strathbeg RSPB Reserve (NES) on 2 October. **Grey Phalarope:** singles were seen from the Port Ellen to Kennacraig ferry (Arg) on 12 October; off Scoughall (Loth) on 15 October; regular counts off Fife Ness (Fife) between 22 October and 6 November, peaking at 28 on 4 November; at South Beach, Troon (Ayrs) on 25 October; off Mull Head, Papa Westray (Ork) on 1 November; 1–2 off Musselburgh (Loth) on 2–3 November, off Hynish, Tiree (Arg) on 11 November; off Balivanich, Benbecula (OH) and North Bay, South Uist (OH) on 21 November, and off Burghead (M&N) on 27 December. **Lesser Yellowlegs:** singles were at Loch of Strathbeg RSPB Reserve (NES) from September to 13 October; at Loch of Melby, Mainland (Shet) on 1 October; at Loch Stiapabhat, Lewis (OH) on 1–4 October; on North Ronaldsay (Ork) on 13–15 October; at Maryton, Montrose Basin (A&D) on 11 November, and on Sanday (Ork) on 19–21 December. **Greater Yellowlegs:** one was still at Loch of Strathbeg RSPB Reserve (NES) from September to 20 October.

Sabine's Gull: singles noted at Hynish, Tiree (Arg) on 2 October; past Peterhead (NES) on 6 October; off Ullapool (High) on 10th; off Chanonry Point (High) on 14th;

near Lagandorain, Iona (Arg) on 16th; one lingered in Bervie Bay, Inverbervie (NES) on 17–18th with one past there on 23 October, and one flew past Strathy Point (High) on 7 November. **Bonaparte's Gull:** one was off Carnoustie (A&D) on 20 October, and at Blackmill Bay, Isle of Luing (Arg) on 9 December. **Mediterranean Gull:** remains much under-reported away from its Ayrshire and Firth of Forth strongholds, but singles were noted at Marwick, Mainland (Ork) on 2 October; at Loch Stiapabhat, Lewis (OH) on 3 October, and one flew past Ardvule Point, South Uist (OH) on 20 October. **Ring-billed Gull:** singles were at Lochdon, Mull (Arg) on 18 December; the regular returning bird at Strathclyde Loch/CP (Clyde) from 24 December into 2022, and another returning bird at Eastfield/Musselburgh (Loth) from 28 December into 2022. **Glaucous Gull:** very low numbers noted - about 50 in October, mostly on the Northern Isles and Western Isles, but also to Morayshire and Ayrshire, mostly singles with a peak of five on Papa Westray (Ork) on 22nd. In November, over 80 noted from Shetland to Borders and Argyll, mostly singles but with peak counts of 10 at Norwick, Unst (Shet) on 10th, and seven on Papa Westray on 27th. About 50 in December, from Shetland to Borders and Ayrshire, mostly singles, but with a high count of four on Fair Isle on 6th. **Kumlien's Gull:** one flew past Girdle Ness, Aberdeen (NES) on 27 November. **Iceland Gull:** extremely low numbers noted - just six reports in October, singles at Lerwick (Shet) on 3–5th; at Wick (Caith) on 18th; on St Kilda (OH) on 21st; on Papa Westray (Ork) on 22nd; at Lossiemouth (M&N) on 22nd, and on Fair Isle on 24–25th. About 40 in November, from Shetland to Borders and Ayrshire, mostly singles, with a high count of three at Peterhead Harbour (NES) on 28th. Over 55 in December, from Shetland to Borders and Argyll, mostly singles, with a high count of four at Portree, Skye (High) on 23rd. **Caspian Gull:** one roosted at Castle Loch NR, near Culshabbin (D&G) on 17 November, and one was at Cramond (Loth) on 7 December. **Yellow-legged Gull:** an adult (possible hybrid) was at Stevenston Point (Ayrs) from 16 November into 2022. **White-winged Black Tern:** one was in Bervie Bay, Inverbervie (NES) on 17 October. **Black Tern:** singles were off Kinghorn (Fife) on 2 October; and off Kilminning (Fife) on 6 November. **Pomarine Skua:** over 50 reported in October, from Highland to Borders and Ayrshire, mostly singles but with three off Musselburgh (Loth) and three off Dunbar (Loth) on 21st. About 18 in November, from Highland to Borders and Argyll, mostly singles, but with six past Lossiemouth (M&N) on 20th, and three past Tiree (Arg) on 1st. One flew south past Fife Ness (Fife) on 19 December. **Long-tailed Skua:** poor numbers - just 13 in October, from Highland to Borders and D&G, all singles except for two off Kinghorn (Fife) on 2nd. **Brünnich's Guillemot:** a notable east coast influx brough singles to Colllieston (NES) on 29 November, and off Fife Ness (Fife) on 1 December. Several 'probables' were also seen: from the Stornoway to Ullapool ferry (OH/High) on 19 November; off Inverbervie (NES) on 29 November, and off Burntisland (Fife) on 8 December. **Turtle Dove:** the first-winter lingered at Coul, Uig, Skye (High) to 13 October; one at Scourie (High) on 6 October, and at Orphir, Mainland (Ork) from 27 November to 12 December. **Snowy Owl:** the female was still on Hirta, St Kilda (OH) from June to 4 December, and an adult male on Ben Macdui (NES) from September to 6 October and again on the Cairngorms Plateau (High)/Ben Macdui from 20 December into 2022. **Hoopoe:** singles were near Kirkabister, Bressay (Shet) on 1 October; at Vatshoull, Whalsay (Shet) on 7 October; at Crook of Baldoon RSPB Reserve (D&G) on 8–9th; at Roster, near Lybster, Harris (OH) on 11 October; at Diracleit, Harris on 30 October; at Kingoodie (P&K) on 8 December, and at Montrose (A&D) on 11 December. **Hobby:** one was at Boarhills (Fife) on 13 October, with one offshore at Fife Ness (Fife) on 18 October.

Red-backed Shrike: one remained on Burra (Shet) to 3 October; singles were on Fair isle on 1st and 4–5 October; at Wester Quarff, Mainland (Shet) on 4th; at Loch of Norby, Mainland and at Sandness, Mainland (Shet) on 6th; at Aberlady Bay LNR (Loth) on 13th; near Cuithir, Barra (OH) on 15–17th, and at Salen, Mull (Arg) on 31 October to 4 November. **Daurian Shrike:** one was on Fair Isle on 1–4 October. **Great Grey Shrike:** singles were on Sanday (Ork) on 18 October; near Lerwick, Mainland (Shet) on 19 October; at Backwater Reservoir (A&D) on 2–10 November, and at Millburn, near Strathy (Caith) on 16 November. **Woodchat Shrike:** the adult male was still on Fair Isle to 3 October, and the first-winter still at Aith, near Voe, Mainland (Shet) to 12 October. **Red-eyed Vireo:** on Mainland Shetland one was at Brae on 2–6 October, another near Sandwick on 4th, and one at Sullom Voe on 4 October. **Nutcracker:** one was at Castletown, Dunnet Bay (Caith) on 10 November. **Waxwing:** first of the winter were 25 at Thurso (Caith) on 11 November; two were at Bishopmill (M&N) on 12 November; 20 at Edzell, near Brechin (A&D) on 14th; one at Reay/Sandside Bay (Caith) on 20th, and 26 at Lochindorb (High) on 24 November. In December, 75 were at Nethybridge (High) on 5th; one at Maryhill (Clyde) on 17th; one at Tain (High) and 20 at Balgray Reservoir (Clyde) on 22nd; one on Fair Isle on 25th; three at Hopeman (M&N) on 27th, and two there on 28th, and one at Elgin (M&N) on 28th into 2022. **Woodlark:** one was at Donmouth, Aberdeen (NES) on 17 October. **Shore Lark:** two were at Grutness, Mainland (Shet) on 3 October; four at Scatness, Mainland (Shet) on 4 October, with five on 5–10th; four

were on Fair Isle on 4–9 October; three on Out Skerries (Shet) on 5–7th, with one still on 8th, and three at Musselburgh (Loth) on 27 October. **Short-toed Lark:** singles were on Hirta, St Kilda (OH) from September to 13 October; on Fair Isle on 1–4 October, and at Cullivoe, Yell (Shet) on 10 October.

Cetti's Warbler: in an unprecedented influx, one trapped and ringed at Kinneil (UF) 13 November; at Ardeer Quarry LNR, Stevenston (Ayrs) from 3 December into 2022; at Kilconquhar Loch (Fife) 10–11 December. **Western Bonelli's Warbler:** singles were at Easter Quarff, Mainland (Shet) on 3–4 October; at Skeld, Mainland (Shet) on 4 October; at Hundland, Papa Westray (Ork) on 5–8th, and at Tresta, Mainland (Shet) on 7–28 October. **Hume's Warbler:** one was at Boddam, Mainland (Shet) on 19–28 October. **Yellow-browed Warbler:** relatively low numbers, with weather systems deflecting birds through continental Europe instead. Over 150 noted in October, mostly on Shetland, but latterly reaching to Borders and Ayrshire. Mostly singles, but with peak counts of six at Sullom Voe, Mainland (Shet) on 5th, and four on Barra (OH) on 7th. In November, singles were on the Isle of May on 1st; at Swining, Mainland and at Maywick, Mainland (Shet) and Haroldswick, Unst (Shet) on 1st; at Kergord, Mainland (Shet) and Scalloway, Mainland (Shet) on 2nd; at Melvich (High) on 11–15th; at Balephuil, Tiree (Arg) on 14–22nd, and at Dulnain Bridge (High) on 15th. **Pallas's Warbler:** singles were at Sumburgh, Mainland (Shet) on 18 October; at Norwick, Unst (Shet) on 31 October to 4 November; on the Isle of May on 1 November, and at Sumburgh again on 2 November. **Radde's Warbler:** singles were on Sanday (Ork) on 3–5 October; near Sullom, Mainland (Shet) on 5 October; at Kergord, Mainland (Shet) on 5th; on the Isle of May on 7–8th; at Hoswick, Mainland (Shet) on 19th; on the Isle of May on 31 October to 1 November, and one at Sullom on 1 November. **Dusky Warbler:** singles were at Hamnavoe, Lunna Ness, Mainland (Shet) on 6–7 October; at Barns Ness (Loth) on 18–22 October, and at Kilminning (Fife) on 19–22 October. **'Siberian' Chiffchaff (*P.c. tristis*):** over 80 were reported in October, all in the Northern Isles except for singles at Carinish, North Uist (OH) and Girdle Ness, Aberdeen (NES) on 16th, at Barns Ness (Loth) on 21st and one at Balephuil, Tiree (Arg) on 26th, and generally singles, but with peak counts of four at Norwick, Unst (Shet) on 26th and on North Ronaldsay (Ork) on 31st. Over 40 in November, from Shetland to Aberdeenshire and Ayrshire, mostly singles, but with higher counts of two at at least seven sites. In December at least a dozen reported, mostly ones and twos, and from Orkney south-west to Ayrshire, with a peak of three at Airdmhor, Barra on 12th. **Greenish Warbler:** singles were at Boddam, Mainland (Shet) on 6th and 20 October. **Arctic Warbler:** one was on North Ronaldsay (Ork) from September to 2 October. **Blyth's Reed Warbler:** singles were at Gourie, Isle of Bressay (Shet) from September to 12 October; on Fair Isle on 1 October; on Foula (Shet) on 11 October; at Voe, Loch of Spiggie and Sumburgh, all Mainland (Shet) on 19th; on Fair Isle on 19–21 October; on Papa Westray (Ork) on 1 November, and at Boddam, Mainland (Shet) on 21 November. **Marsh Warbler:** singles were at Hillswick, Mainland (Shet) on 1 October; at Collafirth, Mainland (Shet) on 1st; at Norwick, Unst (Shet) on 2nd; on Out Skerries (Shet) on 4–5th, and on Foula (Shet) on 7th and 12 October. **Melodious Warbler:** one was at Sumburgh Farm, Mainland (Shet) on 2 November - latest ever Scottish record. **Icterine Warbler:** one was on Sanday (Ork) on 5 October. **Lanceolated Warbler:** singles were near Buness House, Unst (Shet) on 1 October; on Foula (Shet) on 1st [found dead on 2nd], and on North Ronaldsay (Ork) on 4 October. **Barred Warbler:** over 30 in October (to 14th), all on the Northern and Western Isles except for one at Blackdog Golf Course (NES) on 10–12th. All singles except for two at Norwick, Unst (Shet) and two at Breibhig, Barra (OH) on 4th, and two on North Ronaldsay (Ork) on 6th. In November, singles were at Catfirth, Mainland (Shet) on 1st; at Baltasound, Unst (Shet) on 4th, and at Riverside Nature Park, Dundee (A&D) on 12th. **Firecrest:** one was at Morar, Skye (High) on 22–25 November.

Rose-coloured Starling: an adult was at Balnakeil Marsh (High) from September to 13 November; single roaming juvenile at Barns Ness (Loth) on 9–13 October and again 19–24 October, with same at Skateraw (Loth) on 17–18 October, and at Dunbar (Loth) on 23 October; at Carloway, Lewis (OH) on 2 December, and at Prestonpans (Loth) on 19–20 December. **White's Thrush:** one was on Fair Isle from September to 1 October, and one on Out Skerries (Shet) on 19 October. **Varied Thrush:** a first-winter was at Links, Papa Westray (Ork) from 27 October to 2 November - first Scottish record and second for Britain. **Eyebrowed Thrush:** a first-winter was at Kincraig (High) on 29 October to 1 November. **Black-throated Thrush:** a female was at Compass Head, Mainland (Shet) on 23 October, and a first-winter male at Skaw, Whalsay (Shet) on 15–16 November. **Bluethroat:** singles were still at Wester Quarff, Mainland (Shet) from September to 4 October, and at Norwick, Unst (Shet) to 4 October; further singles, all on Shetland, were at Out Skerries on 2–3 October, with three there on 4th; at Burrafirth, Unst on 4–10th; at Haroldswick, Unst on 5–6th; near Gulberwick, Mainland on 8th; at Kergord, Mainland on 8–11th; at Orbister, Mainland on 10–12th; at Houbie, Fetlar on 11th; at Ollaberry, Mainland on 11–12th; on Fair Isle on 17th; on Papa Westray (Ork) on 19th; at

Bakkasetter, Mainland (Shet) on 24th, and at Toab, Mainland on 28 October. **Red-flanked Bluetail:** singles were at Hestingott, Mainland (Shet) on 17 October; on Fair Isle on 19 October; at Voe, Mainland (Shet) on 22–27th; at Swining, Mainland (Shet) on 27 October, and at Lerwick, Mainland (Shet) on 7 November. **Red-breasted Flycatcher:** over 20 noted in October, all singles on the Northern Isles except for singles on North Ronaldsay (Ork) on 9th; at Morghan, Barra (OH) on 14–20th; on Sanday (Ork) on 18–19th, and on North Ronaldsay on 25 October. **Taiga/Red-breasted Flycatcher:** one not definitely assigned to species was at Pierowall, Westray (Ork) on 26–27 October. **'Eastern' Stonechat:** singles were at Mussetter, Eday (Ork) on 19 October; at Seafield/Camb, Yell (Shet) on 1–13 November, and at Burnbank, Lerwick, Mainland (Shet) on 25 November. **Isabelline Wheatear:** one was near Phantassie Farm, East Linton (Loth) on 24–29 November - first record for Lothian.

Yellow Wagtail: one was at Gulberwick, Mainland (Shet) on 10–11 October, and near Eoligarry Jetty, Barra (OH) on 12 October, but otherwise under-reported. **Eastern Yellow Wagtail:** one was still at Loch of Spiggie, Mainland (Shet) from September to 2 October, and 'probables' at Toft, Mainland (Shet) on 16 October, and near Bridgend, Islay (Arg) on 28 October. **Citrine Wagtail:** singles were at Norwick, Unst (Shet) from September to 1 October; at Everland, Fetlar (Shet) on 4 October, and at Housabister, Mainland (Shet) on 6 October. **Richard's Pipit:** singles were at Sullom, Mainland (Shet) on 4 October; at Norwick, Unst (Shet) on 4 October; on North Ronaldsay (Ork) on 7–9th; near Start Point, Sanday (Ork) on 12th, and two on North Ronaldsay on 1 November, with at least one still on 2nd. **Blyth's Pipit:** one was on North Ronaldsay (Ork) on 1 November. **Olive-backed Pipit:** on Shetland, one was at Northdale, Unst on 1–3 October; two at Baltasound, Unst on 1–4 October, with three there on 2nd; singles on Out Skerries and at Ocraquoy, Mainland on 3 October; at Isbister, Mainland on 4–6th; at Brae, Mainland on 4th; at Halligarth, Unst and Skaw, Unst on 4th; at Channerwick, Mainland on 5th; at Norwick, Unst on 5–6th; at Halligarth again on 8th, and on Fair Isle on 19 October. **American Buff-bellied Pipit:** one was on Hirta, St Kilda (OH) from September into October, with two there on 2–3rd, and one still on 4–12 October; one on Fair Isle on 11–12th, and one at Stinky Bay, Benbecula (OH) on 18–20 October. **Water Pipit:** two were at Broxmouth, Dunbar (Loth) on 14 November, with one still on 28th, and one at Bracken Bay (Ayrs) on 15 November.

Hawfinch: over 50 noted in October, generally on the Northern Isles, but south to Lothian and Fort William (High). Mostly singles, plus a few twos and higher counts of five at Bardister, near Ollaberry, Mainland (Shet) on 11th, four at Fort William (High) on 15th, and three at Brae, Mainland (Shet) on 12th. Eleven in November, from Shetland south to Borders and Highland, all singles except for two at Kingussie (High) on 5th, and two at Braemar (NES) on 25 November. One was near Penicuik House (Loth) on 5 December, and one at Gulberwick, Mainland (Shet) on 7 December. **Common Rosefinch:** Over 20 noted in October, all singles on the Northern and Western Isles, except for two on Foula (Shet) on 4th. None in November, but one was at Finstown, Mainland (Ork) on 9–10 Decemmber. **Arctic Redpoll (Hornemann's):** one was near Ollaberry, Mainland (Shet) on 9 October; two at Hametoun Burn, Foula (Shet) on 11 October; singles at Norwick, Unst (Shet) on 11–22nd, with two there on 12–17th: at Gorie, Bressay (Shet) on 12th; at Halligarth, Unst on 12th; at Dale of Walls, Mainland (Shet) on 15th; at Northdale, Unst on 26th; at Lerwick, Mainland (Shet) on 26–27th; on North Ronaldsay (Ork) on 28 October; at Brae. Mainland (Shet) on 1–27 November, at Halligarth on 3 November, and at Baltasound, Unst on 31 December. **Arctic Redpoll (Coue's):** one was at Norwick, Unst (Shet) on 4 October.

Lapland Bunting: Over 30 recorded in October, mostly singles, from Out Skerries, Shetland to St Abb's Head (Bord) and Barra (OH), with peaks of six on North Ronaldsay (Ork) on 4th, with four there on 2nd, and four on Fair Isle on 8th. Seven recorded in November, all singles from Orkney to N-E Scotland and Argyll, except for two on Papa Westray (Ork) on 1st and two at Eochar, South Uist (OH) on 27 November. **Snow Bunting:** over 1,340 reported in October, from Shetland to Borders and Ayrshire, mostly 10 or fewer, but with peak counts of 178 on North Ronaldsay (Ork) on 9th, 105 at Muness, Unst (Shet) on 16th, and 103 at Noup Head, Westray (Ork) on 9th. At least 530 recorded in November, from Shetland to Borders and Ayrshire, mostly five or fewer, but with peak counts of 60 at Lamba Ness, Unst (Shet) on 4th, and 37 at Portknockie (M&N) on 5th. Around 190 noted in December, from Shetland to Lothian and Ayrshire, mostly 10 or fewer, but with high counts of 40 near Kyles Paible, North Uist (OH) on 18th, and 32 at Balranald RSPB Reserve, North Uist on 20th. **Little Bunting:** at least 40 were noted in October, all on the Northern Isles, and all singles except for two at Sullom, Mainland (Shet) on 4th. In November singles were at Grutness, Mainland (Shet) on 12th and at Cullivoe, Yell (Shet) on 13th. **Rustic Bunting:** singles were at Kibberhoull, Whalsay (Shet) from September to 1st October; at Culswick, Mainland (Shet) on 5 October; at Kergord, Mainland (Shet) on 5–6 October, and at Loch of Hillwell, Mainland (Shet) on 6 October. **White-crowned Sparrow:** a first-winter was near Sandwick, Unst (Shet) on 5–9 November.

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PhotoSPOT

Plate 73. Lapwing in early morning flight, Baron's Haugh RSPB Reserve, Clyde, 2 December 2021.

An early morning trip to my local reserve proved extremely fruitful, as a large flock of resting Lapwing decided to have some early morning acrobatic exercise, as they are prone to do, and perform several frenetic circuits of the Haugh. The lighting was quite superb and the two-tone background perfectly mimicked the striking, electric blue and green of the birds' natural plumage when illuminated by such favourable light.

Equipment used
Sony Alpha 1 camera (using artificial intelligence bird-tracking autofocus), Sony 200–600 mm f5.6–6.3 G lens, 1/4000 second, ISO 2000, f6.3.

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Featuring the best images posted on the SOC website each quarter, PhotoSpot will present stunning portraits as well as record shots of something interesting, accompanied by the story behind the photograph and the equipment used. Upload your photos now - it's open to all.